PLANNING AND EVALUATING NON-FORMAL EDUCATION :

A Systems Model

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Foreword

Of late we have been hearing about the changes in the theory and practice of development. These changes seem to have profound implications for education. The concept of GNP is no longer the ultimate object of any development. The assumption that if the gross national product is increased, the benefits of such increase somehow automatically trickle down to large number of people is no longer acceptable to behavioural scientists. In the context of the third world countries, the emphasis on the development of the capital and on industrialization is no longer considered to be adequate. Experience of the past three decades has revealed that insufficient number of new jobs leads to massive unemployment or underemployment and considerable unrest among people. The emphasis in the third world countries should be on distributive justice.

The main function of education seems to be that it should raise the 'population quality.' We are so conditioned to equate 'education' with 'schooling' that by force of habit we disregard education that must go on outside the school. In most of the third world countries the urgent need is not that people should go to school. On the contrary we should create a situation where the school goes to people. The 'folk schools' of Scandinavian countries, the Civic Institutes of Finland and the Community Colleges of America indicate how this can be done.

The real bunch is : To what extent could we impose the traditions of formal schooling on the non-formal system. The transfer should never be total as it would be disastrous. Systems approach implies a clear understanding of input parameters, output parameters and the starategy which maximizes the output even when the input is constant. The wellknown equation is :

$$\text{Input} \times \text{Efficiency} = \text{Output}$$

The equation clearly suggests that if the input is kept constant ; one can increase the output by increased efficiency. This, in turn, depends on the process which is adopted. Trying out systems approach in a nonformal setup, therefore, is not an absurd contradiction as some people may be tempted to believe. Nonformal education does not mean 'non-systematic' education. It implies certain built-in flexibilities and facilities which are generally denied to school-goers and university students. One wonders why we should not inject an element of nonformal set-up in the so called formal set-up. I do believe that such an attempt would go a long way in solving many of our problems in higher education. There is hardly any university in India where the teaching-learning process has remained normal. One can even raise the question of public accountability of a structure of Indian education where about a hundred million students are being educated by three and a half million teachers in 120 universities, 4500 affiliate colleges, 40000 secondary schools, 6 lack primary schools. The total cost of maintaining the structure is more that Rs. 2200 crores per annum which is only next to the cost involved in our defence sector. Such a huge amount is spent when we have a hundred million non-student adults in the age-group of 15-35 years.

Dr. Sharma has tried well to discuss some of the issues of nonformal education in the context of systems approach. This is rather a bold venture, a venture that deserves success. It seems to me that the book "PLANNING AND EVALUATING NON-FORMAL EDUCATION : A SYSTEMS MODEL" does contain some original ideas and that is what I value most.

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Preface

With the intensification of the world crisis in formal education, interest in non-formal education has grown at a rapid pace all over the world. Educators, administrators, politicians, and the average citizen have all become more or less aware of the need for alternatives to formal system of education, for less-expensive and more-effective learning strategies to contribute optimally to both individual and national development. Because non-formal education is an exceedingly complex concept, it may be helpful at the outset to define operationally the concept to present a rational for its systematic study, and to compare some model characteristics of formal and non-formal educational programmes. Moreover a considerable part of non-formal educational programmes arise as a result of inadequacies in the formal school system. Therefore it could be assumed that systamatic study of non-formal education might further under-standing of the directions that the formal system might take if it is to gain greater efficiency with regard to national development goals.

Furthermore a better comprehension of non-formal educational inputs, programmes, processes, and outputs on the part of educational planners in both the developed and developing nations is urgently needed. Unfortunately, educational planners till recently devoted their attention almost exclusively to the formal education sector and neglected the admittedly difficult-to-study non-formal education sector. This warrants widening of the scope of educational planning to include relevant data from the non-formal education sector. This approach might call for greateremphasis on research, on conceptualizing the non-formal education, on delineating its structure and functions, and on the systematic evaluation of its utility as a compliment, a supplement, or an alternative to formal educational programmes and to other programmes related to national development.

This book within the parameters set above, attempts to present a conceptual analysis of non-formal education alongwith a systems model for planning and evaluating NFE programmes. The work cuts across all the out of school education programmes and the model proposed here could possibly be used for development of programmes for bote urban and rural areas.

It is hoped that this work will help in furthering the current efforts being made among scholars and professionals to define the field and to carry out empirical and policy oriented research. The model presented in the book will, it is assumed, help in designing strategies for maximizing non-formal educations's contribution to individual and national development.

I should like to acknowledge with gratitude the encouragement I received from Professor Gunvant B. Shah while preparing the final draft of the book. Dr. Gyanparkash Gupta then academic officer in the office of the District Education office who helped me in conducting the experiment deserves my thanks.

MOTILAL SHARMA

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1

Non-Formal Education (NFE): The Concept

■ ■

A general and broadly accepted definition of Non-formal education was first given by Coombs (1973) :

"......... any organized educational activity outside the formal system-whether operating separately or as an important feature of some broad activity-that is intended to serve some indentifieble learning cilienteles and learning objectives."

This definition is 'value free', according equal legitimacy to any programme which operates outside the official, formal educational system. But non-formal education, as such, is not value free, rather it encompasses conflicting 'objectives and methods based on cnflictinfl value premises. La Belle (1975) says that non-formal education refers to organized out-of-school educational programmes designed to provide specific learning experiences for specific target population. Coombs views non-formal education as a complement to formal education. He also deplores the 'lack of organizational means for bringing important forms of non-formal education within the perview of educational planning-since the latter has typically been confined to formal education and sometimes not even to all of that' (Cooms, 1965). Grandstaff (1973) interprets NFE as a major new component in nation-state development. According to him NFE is intimately connected with the realization of the insufficiency of the economic growth approach to development. Based on reinterpretation of development Grandstaff (1973) further suggests that NFE planners should take the foilowlngd dimensions into consideration while planning NFE programmes : 1) NFE programmes should have a high potential for broad distribution of whatever rewards are promised ; 2) there should be provisions for decentralised planning and for alteration of materials at the levels of use ; 3) solid linkages to real employment opportunities should be provided ; 4) there should be recognition of and response to the aspirations of participants ; 5) there should be a clear basis for programmes in human needs ; 6) programmes should be of limited duration with frequent completion points ; 7) costs should be low. Thus Grandstaff has broaken non-formal education as an eaterprise into a number of dimensions. He further clarifies dimension four and states that "given the flexibility and responsiveness of NFE ; it is almost always possible to go into the situation in which education is to be introduced,and, working with the human and material components of that situation, built an educational design 'on site' allowing the design to emerge from and within the educational activity itself."

Illich (1970) and Fraire (1970) conceived of non-formal education as anti-formal Education, although in two different sense. They both awaited the demise of formal education and those who plan and manage its development. In response to this ideological fervour loaded with anti-schooling bias Book and Papagianvis (1973) stated that 'non-formal suggests that there is very little or no formal structure ; it suggests a highlyparticipative, non-hierarchical and apontaneous learning environment where all participants are both teachers and learners .....we do not, of course, deny that this definition might describe some non-formal educational activities accurately, but we do question whether it adequately describes all non-formal education activities. Some of the assumptions which underly this conception of non-formal education do not dovetail with the requirements of many kill training or political education programmes throughou the world.”

Egginton and Rural (1975) discussing non-formal education in the context of colombian agrarian reform state that NFE has been proposed as a substitute for rural formal education because of its supposed capacity to promote participation and socio-economic satisfactionby imparting more practical, relevant skills. A. I. D. (1970) working paper describes non-formal education as inclusive of "the myraiad of means approaches other than those of the formal school structure by which skills and work-related knowledge and attitudes are acquired, updated and adapted." Chesterfield and Ruddle (1975) describes non-formal education as non-deliberate education which can be defined as the receivers perception of messages in a learning situation which differs from that intended by a transmitter. Evans (1975) uses the terms "Non-formal rural education" while discussing an approach to rural education and says that the overall purpose of non-formal education is to release local resources and to devoeop in the people an awareness of their ability to learn from already available materials and people. The goal of this education is to reach unserved part of the population and provide them with functional education.

Kleis ; Lang ; Mietue and Tiapula (1954) say that "non-formal education is any intentional and systematic educational enterprise (usually outside of traditional schooling) in which content, media, time units, admission criteria, staff, facilities and other system components are selected and/or adopted for particular students populations or situations in order to maximize attainment of the learning mission and to minimize maintenance constraints of the system." Ward and Dettoni (1974) state that "non-formal education is a planned instructional design which uses both overt and covert procedures in a more flexible environment to reach towards a goal determined by a regulated pollcy." In other words non-formal education is need-centred. Particular content is determined by identifying student needs. It is not a compromise but it is a response to a 'now' situation, According to ward and Dettoni (1974) NFE makes eight promises : 1) It proses to be a more effectiee approach to solving certain problems of education for national development and individual growth ; 2) Its education is functional and practical, i. e., related to the life-needs of the people ; 3) non-formal education seeks to maintain a cost effective consciousness of what it ooes in order to provide the most effeotive and purposeful consequence with utmost efficiency ; 4) Involved in efficiency and effectiveness is the inherent commitment to seek for innovative means to achieve thegoals ; 5) non-formal education offers a more electric, more elective multi-disciplinary approach to the problem of development in a country ; 6) non-formal education promises to produce short-term effects as well as long-term ones ; 7) non-formal education assists in the decision marking at educational and developmental funding agencies on both at national and international level ; and 8) non-formal education provides a more rapid and immediate measure of the effectiveness of instructionai design. Thus it can be seen that the emphasis on non-formal education is less a matter of new information or ideas than it is a matter of new focus or emphasis. If it is used responsibily as a total educational plan for national development, it must be seen in relation to the whole of educational efforts that exist within a society. Thus we have before us an occasion to revise and to innovate instructional modes. There is an existing possibility that the NFE movement will open the eyes of the world to see alternatives to traditional lecture-style approaches to instruction. Also it provides an occasion to involve ourselves as technician-helpers rather than as goal setters.

Case and Nichoff (1976) view NFE as education by objectives and say that "non-formal education is a deliberate process of communicating ideas and developing skills in adults and out-of school youths which will help them to increase agricultural production ; qualify them for, or increase their performance in positions in Government, industry and cammerce ; attain higher health standards ; participate more intelligently in civic, economic end political groups ; and achieve other personal and social goals. The types of activities are extremely varied, highly focused on specific learning objectives, and of varying duration." The Concept of 'intitial learning system' as given by Platt (1976) is quite-close to the concept of NFE. He says that initial learning system besides other things aims at relaxing the rule or age-specific school entry and permitting intermittent or ecurrent enrollment. It means offering second and multiple chances to the many people either denied access or pushed out by irrelevant offerings and by school calendars and daily schedules not compatible with subsistence work rhythms of planting and harvesting, caring for siblings etc. He emphasises theimportance of 'Conscientization' and further says that I would offer that initial learning systems are designed to help people to evolve out of dependency, to master the ability to learn, and to acquire skills to participate in the life and work of their communities. Rauil Ferrer Perez (1972) uses the phrase "the parallel system of education" which is similar to NFE in terms of content. According to him the parallel system of education is not remedial but complementary in order to pave the way for lifelong education corresponding to the needs, peculiarlities and potential of a country which has set itself the task of rapidly putting under development behind it." Coombs (1968) also describes NFE as "complementary" to formal education. In terms of national development it is similar to the concept given by Sidney Grandstaff (1973). Naik (1975) recommending the need for non-formal education system agrees with the views of Coombs (1968) and says that "the most urgent reform needed, thereforeis to transform the present educational structure with the introduction of a large non-formal element. At the elementary stage, there should be multiple-entry for children who enter at later ages as well as a large programme of part-time education for grown-up children who are required to work in or for their families: "Peer tutoring" and expension of literacyprojects of UNESCO into "out of school" education are the other dimensions influencing the development of the concept of NFE. Coles et at. (1974) while examining the factors for a system of non-formal education say that 'non-formal education' is an unfortunate label. It is negative, lacks lustre and may be mistaken for informal education hence there is urgent need to find out an alternative, a better and more dynamic term.

Concludingly, it could be said that usually NFE focuses on improvement of social and personal livings, occupational capability and vocational competency. It is 'non-school' because the learning environment is more characteristic of out-of-school learning. NFE is deliberately planned with a motive to bring educational opportunities closer to the people and to open more alternatives to formal schooling experience. It is need centered and its each programme has shortest possible time. NFE provides more scope for allowing the aspirations of the participants to function as powerful formative elements in programme planning and design. Participants in NFE activities can more easily turn off the "learning message" if it does not appeal, or if it is considered, unrealistic, or is in conflict with important social or individual values, or is simply irrelevant, NFE could be termed as education by objectives. The important thing is to help men to help themselves, to place them in consciously critical confortutation with their problems. In fine, it could be said that it is an open-system of education with aims at providing an active, critical, dialogical educational programme concerned with economic, social and political responsibility so that every human being to become an authentic huma being. Critical consciousness raising on the part of the participants is central to the programmes of NFE.

2

Non-Formal Education For Rural Development

Rural Development :

Rural Development could be defined as "the process whereby a series and quantitative and qualitative changes brought about within a given rural population result in improved living conditions for the population through an increased capacity" (UNESCO, 1970). The process is complex. It involves the solution of technical, ecological, economic, political and social (human) problems with limited administrative, financial and man-power resources.

It warrants the integration of new technology into an already on-going socio-cultural process. The integrated approach would also take into account the role local leaders might play in improving rural welfare, reorient the planning process so that local people play a greater role in selecting alternatives and ensure inter-disciplinary and inter-organizational cooperation in the process of improving rural life. It also warrants that political commitment at the highest level of rural development programmes is essential and a united approach to the farmer is needed. Besides this mobilization of public opinion behind rural development programme is of paramount importance, and that there should be a commitment on the part of the governing systems to convert the usual sectoral-and budget-orineted method of economic planning into an area-oriented integrated approach so that local invitiative could be encourged and optimaly utilized.

These observations further suggest that planning for rural development will require detailed micro and macro socio-economic data. It emphasises the need to trace the consequences of alternative rural development strategies over time. From these observations it is also clear that all agricultural development can be rural development, but all rural development may not necessarily be agricultural development.

Education and Rural Development :

The relevance of education for rural development is obvious from the observations made by Sheffield (1971). He says that—

> "One of the chief tools with which to achieve rural transformation is education and training in the new techniques and attitudes, as much training in cooperation and the management of credit, as much the education of women as the education of children and adolescents in formal schools and univesities a more significant contribution to rural development can be made by strengthened, more clearly thought out and effectively coordinated educational service to adults than by alterations in or expansion of the existing primary and secondary schools."

All education from primary school through University should contribute to improving living standards in the rural areas.

The overall effort of educating rural children and adolescents must be guided by a well conceived strategy adopted to the special characteristics of each rural area, Development of a multi-purpose rural learning system (multi-skill education) must be seen as an integral part of a process of re-examining and redefining the goals of rural development. This effort requires redesign and reorientation of all the components of the rural learning system and the blending of these components into a coherent whole. The initiative, resources and enthusiasm, and human energy required for this massive educational effort will require foundamental attitude changes among rural community, teachers, and administrators toward education. Small inputs of money and large inputs of leadership and reorganization of structurers could make an important contribution the proposed system of education for rural areas. Besides this illiteracy is another growing problem which has attracted attention of all of us. In India the literacy is as low as 30 per cent. Some thinkers assume that literacy is a necessary precondition for develop-ment whereas there are educationists who recognise that illiterate persons are very capable of learning what they need to know to adjust and contribute to development even though they cannot read yet. Ward and Herzog (1974) state that "unless lesser developed countries can break out of the "literacy first" perception of education, they are dooming huge percentages, and often increasing numbers of their citizens of continued ignorance, powerlessness and poverty." I do not deny that 'literacy is a useful skill for people in the process of development. But, I do deny that ready that reading is the only way to learn the knowledge and skills necessary for develpment. People who cannot read can develop and achieve maturity and leadership capabilities through channels which do not require prior literacy skills among the learners. This situation demands development of instructional experiences which will "effectively communicate" knowledge necessary for development to people who cannot read. Secondly, as far as the problem of illiteracy among adults is concerned I feel that political system of the nation must run its own network of community education centres to equip all the members of communtiy, who have crossed compulsory schooling age, with minimum literacy skills so as to enable them to understand the philosophy and problems of the nation and also enable them to participate effectively and contribute to governance process of the nation. It is moral responsibility of political leadership of the nation to educate and involve the political membership they are leading in the governance processes.

Rural Development and Non-Formal Education :

The problem of rural education is to deal with illiterates, semi-literates, and educated simultaneously. It warrants for an integrated effective system of learning which provides for all the three modes of learning i. e. (1) informal (2) formal; (3) non-formal and provides flexible learning environment. Coombs and Ahmed (1974) equate education to learning. I intend to agree to this view. Both the Non-Formal Education and the informal education are out of school (formal structure) still Non-Formal Education has 'form' and it is a systematic and deliberate effort. Coombs and Ahmed (1974) define Non-Formal Education"......any organized, systematic, educational activity carried on outside the framework of the formal system to provide selected types of learning to paricular subgroups in the population, adults as well as children." La Belle (1975) says that "Non-Eormal Education refers to organized out of school educational programme designed to provide specific target population." He has little difficulty in accepting the definitions of Coombs and Ahmed and the concentric circle model of modes as discrete entites rather than as modes of emphasis or predominance. La-Belle does not treat these modes of education as 'discrete entites but he treats them as modes of amphasis or predominance.

It could be said that, in the broadest sense, non formal education and traiding encompass the entire range of learning process and experiences outside the regular graded school system. Possibly, in the aggrgate, more people are exposed to non-formol learning activities than to formal schooling. And, as a continuing process of development of skills, knowledge, and capacities of the

Labour force, non-formal learning and training are certainly as imporant as the formal education. I llich (1970) and Freire (1970) conceived of Non-Formal Education as anti-formal education, although in two different senses. They both awaited the demise of formal education and those who plan and manage its development. In response to this ideological attack over-loaden with antischooling bias Back and Papgiaunis (1973) noted that "non-formal" suggests that there is very little or non-formal structure; it suggests a highly participative, non-hiearchcal and spontaneous learning environment where all participante are both teachers and learners—Grandstaff (1973) views Non-Formal Education as a major new csmponent in natio state development.

Non-formal education system could be seen as a planned instructional design to create a more flexible environment for the learner to reach towards a goal determined in consultration with the learner. This gets further support from Case and Niehoff (1976). They say that non-formal education is a deliberate process of communicating idesa and developing skills in adults and out-of school youth which will help them increase agricultural production, qualify them for, or increasing their performance in positions in government, industry and commerce, attain higher health, standar particpate more intelligently in civic, economoi and political groups; and achie- ve other personal and social goals. The types of activities are extremely varied, highly focussed on specific learning objectives, and of varying duration. Added to the 'conscientization' the concept given by Freire is another important to be considered in context with Non-Formal Education. Haksar (1976) appreciates the concept of 'conscientization' in connection with rural development and says that, the first task of all educations and educational effort in rural areas is to render each individual peasant in rural society conscious of his position. He needs to be most vated to struggle with dignity to improve his condition of life. Unless a massive effort is made to make rural population consicious of the significance of legislative measures and they are involved in implementation of legislation through appropriate organizations, their social existance cannot chage for the better "Participation in the governance process on the part of the people of almost all the nations in the world is very low to-day. Voting is the largest form of participation which also range between 30% to 65%. The reason is obvious, participation depends how far one is conscious of the fact that he is one of the "trustees of evolution of the system (the nation)", hence he or she has an active role to play in the governance of the system he is part of Platt (1976) also emphasizes the importance of 'conscientization' and says that I would offer that 'initial learning systems' are designed to help people to evolve out of dependency, to master the ability to learn, and to acquire skills to participate in the life and work of their commitees.

Thus it could be said that Non-Formal Education focuses on improvement of social and personal living, occupational capability and vocational competancy which are basic to rural development. It aims at socio politico-economic growth of individual as well as nation. It is more-flexible and the learning environment is more characteristic of out-of school learning. It is deliberately planned with a motive to bring educational opportunities closer to the people and to open more alternatives to formal schooling experiences. It allows the aspirations of the participants to function as powerful formative elements in programme planning and design. There is emphasis on low per-capita instructional cost. It is need centered and could be defined as "learning by objectives." Participants in Non-Formal Education activities can more easily turn off the 'learning massage' if it does not appeal or if it is considered unrealistic, or is in confict with important social or individual values, or is simply irrelevant. The 'class-rooms' for most Non-Formal Education activities are the fields; village centres, factories, and other work places of adults and out-of school youths. Besides this a large percentage of clientele to be taught by Non-Formal Education methods may be illiterate or semi-literate, where literacy is not necessarily a 'primary objective'. Obviousls, Non-Formal Education is concerned with actual person in the fullness and totality of his aspects-intellectual, emotional, aesthetic, vocational, political (or physical).

Further more the non-formal education model emphasises the idea of universal opportunity for learning by both audlts and children as a means of maximizing the effectiveness of all the members of an active society as human beings, citizens and members of labour force. The major components of this learning system may be (1) the skill and knowledge generating functions of working environments and employing institutions (2) broad based pra-employment education at all levels, and (3) out of school education and training services through a wide variety of programmes aimed at developing more perceptive and knowledgable people capable of entering and pertorming the widest possible range of occupations. In fine, its aim is to generate skills, knowledge and capacities in man which are related to the economic political and social goals of the nation. Hence in relating learning services to national needs, consideration must be given to cultural, social and political as well as economic development because man lives by more than bread alone.

Non-formal education for rural development should not be viewed as a separate programme or an external input. It is a part and parcel of the development process and should, therefore, be taken as an integral component of the various development programmes, with special emphasis on the needs of the poor and underprivilledged sections of the rural community. The programmes should aim at helping the rural people to form themselves into effective learning-cum-productive groups, with the emphasis on skills needed for economic, political and social development. The cantent and learning material will have to be local specifically based on the varying needs of different socio-economic groups in the village. The programme requires co-ordination and close collaboration among various functionaries at the field or grass-root level. For effective co-ordination at the field level co-ordination committees could be formed at district level. Some of the programmes which deserve emphasis in connection with rural development may include adult literacy programmes, home living, work oriented projects, corporate living, farmer training centres, village polytechnics draft training programmes, urban skills centres closely associated with employing institutions, study centres, nutrition and health centres and planned parent-hood clinics.

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Besides this while considering the problems of rural development adequate attention has not been given to the role of women in it. Extension services have tended to exclude women or teach them things that do not enhance their skills in agriculture and participating in decision making. Policy recommendations for progrommes for rural development must utilize theoritical and practical consideration to narrow the gap between role of men and women in rural development.

In the end, the following questions warrant further loud thinking on the part of the readers :

1. In what important areas of rural development can non-formal education fulfil education and training needs which formal schooling is unable to provide ?
2. Are non-formal education programmes optimally susceptible to innovations in rural education and/or development ?
3. In what areas do non-formal education activities provide more effective learning at lower costs ?
4. How far 'conscientization' programme can help in educating illiterates ?
5. In what ways non-formal education can provide equal opportunities to men and women to participate in all the programmes of rural development equally effectively ?
6. What could be the role of social researches in conection with the programmes of rural development ?

3

Evaluation in Non-Formal Education

Since NFE is relatively a new and emerging concept, one cannot expect of availability of very many models of evaluation of NFE programmes. Such models have been developed and used in the context at adult education which in process is very close to NFE. This section presents an overview of techniques, procedures and such models of evaluation.

Selected Techniques and Procedures used to evaluate Adult Education

Most often adult education activities are evaluated by some types of participants assessment. This is specially true of short term programmes. Kropp and Verner (1957) have developed a Scale that measures participant attitudes. Techniques for evaluating a short term adult education activity while it is in progress have also been developed. Alford (1974) outlines four devices for evaluating outcomes in the conference settings at the end of the programme and suggests that these devices can also be adapted to other situations. An instrument for obtaining descriptive data has been developed by Baser and Miller (1972) for the purpose of collecting data to improve decision making within adult education programmes and continuing education centres.

The use of checklist of objectives for evaluating public school adult education programmes has been suggested by Kempfer (1955). Six different items of descriptive information constitute the basis for the objectives. A clock-hour index developed by Kempfer (1955) attempts to measure the quantity of adult education provided in a community.

In addition to descriptive measures and participant assessment of programme effectiveness in adult education, there is a growing concern for measure of programme effectiveness which assesses results obtained for money spent. This is most often referred to as cost benefit analysis or input-output analysis. Although cost-benefit analysis is beginning to be used in adult education, Steele (1971) suggested that input-output analysis is useful with adult education programmes because it considers philosophical question in addition to monetary values. Programme outputs in adult education are also the concern of a study done by Roomkin (1972) in which he applied cost-benefit analysis to adult education. Although the above list is hardly comprehensive. it does suggest that evaluation in adult education is extremely varied.

Some Theory Based Approaches to Evaluation in Adult Edvcation

Evaluation models have been used extensively in education. Most have emerged in response to specific evaluation needs. Some of these evaluation prototypes exist in a rather abstract from and are difficult to operationalize without the aid of a professional avaluator. Most of them, in fact, are not designed for programme evaluation but conceptualizations are used by professional evaluators. Evaluation models that have been applied to adult education include the objective based approach by Tyler (1942, 1949), the Countenance model by Stake (1967), and the context, input, process, product (CIPP) model by Stufflebean (1968, 1971). The methodology of Scriven (1967, 1973), not yet operationalized in adult education, is examined in detail since the same has been used for the present study.

Before an attempt is made to discuss Scriven's model it would be profitable if a brief analysis of "Evaluation Models" cited above is given. It may provide a useful background for discussions of Scriven's model.

Objective based approaches are the most commonly used method for evaluating adult education programmes. Most importantly the objectives signify those outcomes which the programme developer hopes to attain. However, within this obvious strength lies the major weakness of evaluating programmes solely on the attainment of objectives. In the objective approach to programme evaluation in adult education as applied by Miller and McGuire (1951), Deniston, et. al. (1968) and Shearon (1970), a great deal of attention is given to stating the objectives, developing appraisal techniques, and gathering performance data, those outcomes (specially unitended outcomes) not captured by an objective are ignored. Stake's (1967) model emphasises on the collection of descrlptive data and judgemental data from various populations. This model might have greater utility for administrators who seek to evaluate local programes if distinctions were made concerning kinds of data relevant to evaluation conducted for a specific purpose. Its usefulness is generalizable only to evaluations of short term programmes of a highly structured nature. Grotelueschen and McQuarrie (1970) applies Stake's model to workshop evaluation.

Stufflebeam's (1968) CIPP model places the key emphasis on administrative decision making. Although decision making is the focus of the CIPP model operationalized by Bhola (1973) and Knox (1971), neither the model nor its applications make it clear how the decision making process involves from the four types of evaluation described by Stufflebeam. Furthermore it requires a specialist to conduct the evaluation. In view of the difficulties inherent in evaluation adult education programmes and the problems encountered in operationalizing the Tyler, Stake, and Stufflebeam models, other prototypes in evaluation need to be examined. Scriven's model is one of such prototypes which needs empirical examination in context with non-formal education.

Scriven's Model

According to Scriven (1967) evaluation plays many roles but its primary concern should be with determining the value or worth of an educational product or programme. The model described by Scriven Combines many of the Salient characteristics of other prototypes into an evaluation system that collects relevant data, attends to the attainment of specified objectives and unintended outcomes, and provides a basis for judgements based on identified standards.

According to Scriven, evaluation has various goals, rules, and approaches all of which are different dimensions of the process of evaluation. Scriven suggests that all of the goals, whether abstracts or specific, should be listed and evaluated in terms of their worth. The achievement of objectives derived from goals are useless unless the goals themselves are worthwhile.

Scriven focuses much of his discussion on distinctions between formative and summative roles of evaluations. In a formative role evaluation information is used by the developer to improve the programme. Internal use by the developer is the purpose of formative evaluation. The purpose of summative evaluation is to provide information to an external agency. Evaluation information is used in this sence by the developer to justify or provide recognition to the programme or the product. The methods used in formative and summative evaluation may be the same or very similar but it is the purpose for which they are to be used that distinguishes them.

Two different approaches, 'interinsic' and 'pay-off' are identified by Scriven as procedures for conducting an evaluation. Intrinsic evaluation is described as assessment of the means by which the ends are accomplished. Examples of intrinsic evaluation activities include examination of the curriculum, teacher competences, and physical facilities. The second approach, 'pay-off evaluation', is concerned with evaluating the effects of the programme. The effect of the programme on students are usually the primary consideration in pay-off evaluation although effects on teacher, parents, and others may also be considered. Each approach involves consideration to what is being evaluated by the other approach. A thorough intrinsic evaluation demands some consideration of goal achievement and a good pay-off evaluation will attend to the value of the goals and the means by which they were achieved. As a compromise to the problem of choosing one approach over the other, Scriven suggests a 'mediated' or 'hybrid' evaluation which involves a combination of both approaches.

Scriven's 'hybrid' evaluation approach starts with the step of goal formulation. The goals are used more as guides. Once the goals are formulated they should be reexamined frequently and modified as changes occur in developmental activities, Indicators of goal achievement should be listed. Scriven suggests a "consistency analysis" to judge whether or not the goals, the content of the programme or course, and the indicators of achievement are compatible.

The criteria for goal formulation and consistency analysis are based on Scriven's modification of the tridictomy devide by Bloom, Englehard, Furst, Hill, and Krathwolal (1956) and Krathwohl, Bloom, and Masia (1964) concerning cognitive, affective and psychomotor variables. Scriven divides the cognitive area into knowledge and comprehension. Affective variables become motivational, and moter variables become physical or non-mental variables.

Values and costs also have a place in the Scriven methodology. The framework developed by Sanders and Cuanningham (1973) is an effort to operationalize Scriven's methodology.

Implications of Scriven's Model for Evaluating NFE Programmes

The aspects of the Scriven methodology which have the most promise for evaluation in NFE are : (a) goal formulation ; (b) ranking and evaluation of goals, (c) deriving objectives from goals, (d) formative and summative roles applied to programme evaluation, and (e) the combination of intrinsic and pay-off approaches.

Scriven's concern for goals is much like Tyler's concern for objectives as a prerequisite for evaluation. Besides this unlike the rigid objectives based approach, there is a built-in-flexibility which allows intended as well as unintended outcomes to enter the evaluation. Because Scriven's model does not start with objectives as standards whose attainment is measured, the lack of well formulated objectives as a prerequisite to programme evaluation are not problem. Again, the distinction between formative and summative roles in evaluation allows the programme developer to consider the purpose for which the evaluation results are to be used. Then the distinction between procedures for evaluating the results of a programme and procedures for evaluating the means used to bring about those results have many implications for evaluating NFE programmes. The heterogenity in student backgrounds, as well as other factors inherent in NFE make assessment of student achievement an inappropriate measure of the worth of a programme. Though the methodology proposed by Scriven does not overcome all the difficulties in evaluating NFE programme it does offer solutions to many of the problems that continue to plague administrators when they attempt to evaluate local NFE programmes.

Description of NFE Programme Evaluation Model

The NFE Programme evaluation model used in this study consists of a series of steps derived from evaluation activities common to most evaluation model. These steps can be divided into four steps : (a) pre-development ; (b) establishing objectives ; (c) data generation and analysis ; and (d) evaluation.

The stages and the steps within each stage are given below :

1. pre-developmental stage :

1—Needs assessment,
2—Rank needs

2. Objectives Development stage :

3—Translate ranked needs into programme goals,
4--Define objectives within goals,
5—Rank objectives

3. Data generation and Analysis stages :

6—Develop instrumentation and procedures
7—Apply instrumentation, gather data.
8—Analyze data

4. Evaluation stage :

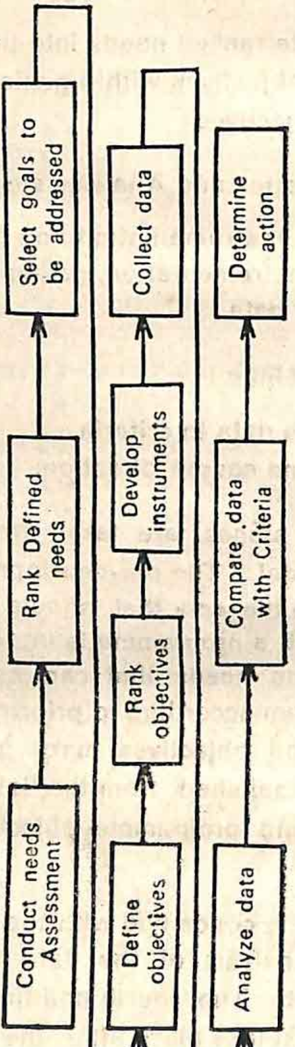
9—Compare data to criteria
10—Determine course of action.

The first two stages are taken from the Sanders and Cunninghams (1973) model. The pre-developmental stage includes activities which describe the work that should be done before the gathering of data about a programme is undertaken. Included in this stage are assessing needs that can be served by the programme and ranking them according to priority. Activities related to programme goals and objectives make up the second stage. Programme goals are established from the list of needs, ranked in order of importance, and programme objectives are derived from these goals.

The third stage is concerned with the instrumentation and data gathering. The analysis of the data becomes the content of an evaluation report. The fourth and final stage is concerned with those activities that take place after the evaluation report has been prepared.

The four stages within the procedure are intended to suggest continuits and a logical progression from one stage to the next.

A graphic depiction of the steps in the total evaluation process are shown in figure-I.



(*Fig. I. Steps in evaluation process*)

The evaluation process described above relies on data collection. The types of data to be collected are identified by Sanders and Cunningham (1973) as internal and external. In this study internal and external data constitute the dimensions of the programme to be assessed. Internal data are used for assessing programme means and external data are used for assessing programme effects. These two assessments attempt to operationalize Scriven's intrinsic (assessment of means) and pay-off (assessment of effects) approaches to evaluation. The programme effects are outcomes that result from a programme and include both intended and unintended autcomes.

The methodology suggested by Scriven (1967, 1973) has been developed into a framework for evaluating NFE programme, in Churu district. Although the particular methodology used in this study is primarily Scriven's but evaluation concepts not necessarily belonging to him but complementary to his work will also be included in the evaluation procedure emerging from this study. For example, Stake's (1967) attention to collecting relevant data and Stafflebeam's (1968) concern for the decision making role of evaluation will be combimed with certain of Scriven's concepts of evaluation.

The purpose of appending the various evaluation methodologies to that of Scriven is to provide a procedure to aid the administrator in conducting a non-technical evaluation of the existing NFE programme.

I Internal Assessed Means

1 Physical facilities
2 Curriculum design
3 Staff qualifications
4 Staff turnover
5 Staff pre and in-service training
6 Guidance and counselling
7 Instructional methods and materials
8 Audio-visual and other educational media

9 Administrative arrangements
10 Students characteristics

II External Assessed Effects

1 Student achievement
2 Student grade level change
3 Student drop outs
4 Student graduates
5 Change in occupational aspirations of students
6 Change in occupational status of students
7 Change in interaction of student with family, peers, and community.
8 Change in attitudes of students, teachers, administrators
9 Unanticipated outcomes

Procedures involved in Development of the Proposed Evaluation Model

Validating the Model. The validation process of the evaluation model developed by the writer constituted of consultation with four experts with proven competence in educational evaluation. A set of guidelines was prepared for their inspection that specified the evaluation procedure and they were asked to react and make recommendations on the criticality of each step in the procedure. The guidelines consisted of: (a) a memorandum solicitig their impressions and reactions to the NFE evaluation model. (b) a statement of the purpose of the study, (c) a description of the NFE evaluation model, and (d) a chacklist for recording their reactions to the steps within the model. Based on the reactions and recommendations of the evaluation experts, several steps within the procedure were modified.

Identifying Programme Components. The second step in the development of the procedures for this study consisted of identifying the internal and external components to be assessed programme. Once the components were validated and ranked by : (a) an administator of district NFE programme ; (b) a NFE consultent, (c) a professor of education. They were asked to : (a) react and make recommendations regarding the criticality of each internal and external component, (b) suggest other components not identified by the writer, and (c) rank the various components according to evaluation priorities of NFE programmes.

The NFE experts were given : (a) a memorandum explaining the purpose of the procedure, (b) a brief description of the NFE evaluation model, (c) an identification of the specific factors within the internal and external dimensions to be assessed, and (d) a checklist for rating the factor according to priority in NFE evaluations.

Based on suggestions from the NFE consultants, the following factors ware selected for instrumentation. In the dimension of internal assessed means, those factors found as most important were : (a) curriculum design ; (b) instructional staff qualifications ; (c) instructional materials ; (d) instructional staff ; (e) inservice training, and (f) instructional methods. In the dimension of external factors, those factors receiving the highest rankings were achievement level of students and attitude of students.

The factors selected for instrumentation within internal means were grouped into two clusters—those concerned with the delivery of instruction and those concerned with staff qualifications. The delivery of instruction included :

(a) curriculum design, (b) instructional methods, and (c) instructional materials. The staff qualifications cluster included : (a) Instructional staff competency, and (b) instructional staff inservice training.

The factors selected for instrumentation within external effects were clustered under student performance. Studect performance included : (a) achievement level of students, and (b) attitudes of students.

The relationship between the clusters and the total learning process it shown below :

Inputs	Transformation	Outputs
Internal Means	Processes	External Effects
1. Delivery ot instruction		1. Student performance
a) Curriculum design		a) Student Achievement
b) Instructional materials		b) Student Attitude
c) Instructional Methods		
2. Staff qualifications		
a) Staff competency		
b) Staff inservice training		

Fig. III

Relationship between selected programme inputs and outputs.

Instruments developed to be used for education of NFE programme as per requirements of this model have been given in the appendices.

4

Anatomy of Systems Approach

Systems Approach

The concept or systems approach is based on the concept of "system" because system specialist's main point of interest is reaching the 'Vantage point' from where he can see the whole given phenomenon (system) because study of isolated parts cannot provide adequate information about the system. The emergence of the principle of wholeness is the heartening point of 'systems concept.' Meaningful beginning of systems concept emerged with the works of Bertalayffy (1951) and Boulding (1956) which then provided foundation for general systems theory. Cybernetics (Winner, 1948) also makes use of this concept. Webster's new International Dictionary defines 'system' as much as in fourteen different contexts. Bertalanffy (1951) defines system as "any arrangement or combination, as of parts or elements, in whole." Boulding (1956) has postulated a taxonomy of systems in terms of a hierarchy consisting of nine levels. Robb (1973) says "a system is an orderly arrangement of elements which works in a particular way : it can be a living organism or a cosmic phenomenon." Ashby (1952) says each system, if it is to be a system, must have certain well defined variables which have closely interrelated. These variables may be [1] full function variables ; [2] partiunction variables ; and [3] step-function variables. Broadly speaking a system could be defined as any entity, conceptual or physical, which consists of interrelated, interacting or interdependent parts. Every system except the largest has supra-system (environment) and every system except the smallest has sub-system. Therefore a system operates in an environment, which lies outside the system. When we say that something lies "outside" the system, we mean that the system can do relatively little about its characteristics or its behaviour. Furthermore, not only is the environment something that determines in part how the system performs. Secondly, the environment of the system greatly influences the "requirement schedule of the system. Hence it could be said that the environment of a system is a set of elements and their relevant properties, which are not part of the system but a change in any of which can produce a change in the state of the system. Besides this there is one more important element in systems concept which warrants our attention, this element is 'goal.' System specialist has to determine and define system's objectives and their measures of performance while designing a system. The set of specified objectives, so stated, can be called as "goal state" of the system. Goal state is the State towards which a system tends to move. Terminal behaviour of a learner could be said to be the goal state in context with a given learning task system. Ashby (1952) makes an important observation with regard to goal state of a system. He says that compatibility of goal states among sub-systems and between the sub-systems and the total system as well as supra-system is an important point which decides the performance of the system for achievement and maintenance of the goal state. This concept can profitably be used while developing task-hierarchies for learners.

This notion of system applies to a cell, a human being a concept, a theory, a seciety, as well as to an atom, a plane or a galaxy.

The systems concept provides a framework for visualizing internal and external environmental factors as an intergrated whole. It allows recognition of the proper place and functioning of sub-systems. The degree of 'wholeness' makes the whole something different from, and more than, the individual units considered separately. The way to look at the whole system is in terms of plan (organized form of the interrelated components) where planning means laying out a course of action that we can follow, that will take us to our desired goal. Hence systems apparach to problem warrants that a piece-meal approach is replaced by an overall approach. Barrow (1976) conference emphasised that physicians must have skill of dealing with "total patient." Systems approach is based on the concept of "wholeness." Systems approach interprets systems in "wholeness terms."

Five different names viz. "systems engineering," "systems analysis," "system approach." "operational research" are used for explaining this methodology (systems approach). Systems approach is different from each of them but utilizes all important elements of these methodologies and thus widens the scope of systems science through better communication between them. Systems approach is an interdisciplinary approach. It provides a framework within which to tie together many separate and possibly divergent disciplines, which otherwise might fail to make an effective contribution to the overall optimization of problem. Thus we can say that systems approach is a team activity and brings together specialists with such diverse backgrounds as natural sciences, engineering, mathematics, economics, politics sociology, psychology, behavioural sciences etc. etc, It helps in developing a common pedagogy of communication which is essential to communicate effectively with the various specialists, whose advice is essential, and to stimulate their oreativity within this interdisciplinary approach, Makridakis (1971) says that basically "the systems approach is a way of thinking." Thus systems approach can be seen as "an orderly way of appraising a human need of a complex nature (such as learning or any other problem) in a let's stand back and look at this situation from all its angles & frame of mind. So in other we can say that the systems approach in a way of studying changes in complex situations in a selective way. The fundamental difference which exists between systems per se and the systems approach is that true systems can be rexognized [if they have not been deliberately constructed] but the systems approach involves identifying systems in the midst of complexity. The first have an objective basis ; the second are wholly subjective concepts. Differentiating systems approach from educational research Stowe [1973] says that the two methodologies, i. e. systems approach and educational research, are effective in mutually exclusive ways, differently applicable in educational problem solving, and thus complementary. Major characteristics of systems approach is recognition of the need to seek appropriate solutions, given the larger environmental scheme of things. But it is not only useful in problem solving but also helps in locating actual boundaries of problem and its environment. The systems approach is not unique either because it is interdisciplinary [though this is important] or because it is hierarchial [though this is necessary] but its unique characteristic is that it seeks to place the cut-put of a sub-system in a total system context which is based on what can be found out about the true nature of the performance of the total system. The application of systems approach earlin the conceptual phase helps to reduce the chances for oversight, or the occurance of so called 'appraisal gap.' And this is achieved by using a structured technique to continuously identify and assess the impact of changing objectives, constraints, and design criteria on required resources and available resources : technologies, personnel and facilities. The systems approach is 'deductive/inductive in nature. The thinking pate provided by this approach is in the form of closed loop-that has distinct stages for timely inputs and continuous feedback.

Components of Systems Approach

There are three components of systems approach.

Systems Analysis : At this stage needs of the system are specified in terms of their boundaries and in the light of the resources available and constraints present. Popham & Baker (1970) has described needs assessment as identifying discripencies between desired outcomes and current status. Secondly, the needs are further analysed and translated in terms of specific objectives. The objectives emerge out of needs of the total system and are used as departure point in systems approach. Thus each objectives is analysed by successive stages, into detailed requirement and approaches, additional new data are introduced (inductive process) to support the analysis. To decide with approach and solution to be selected. Selection criteria are determined, compatible with the original objectives, and are to chose the approgches.

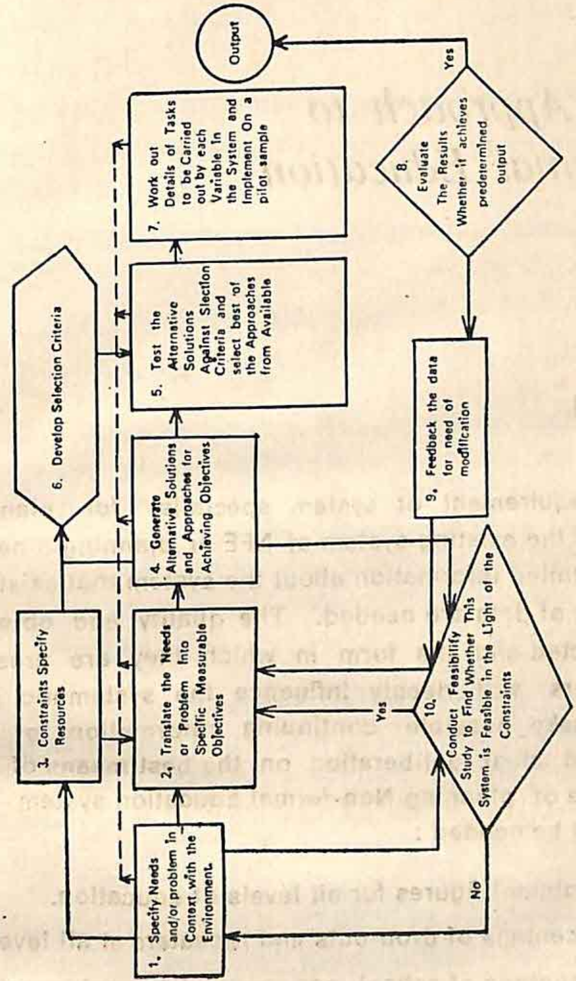
Before we attempt to demonstrate application of systems approach in non-formal education, let us briefly summarise the stages involved in this total phenomenon. The first stage is that the system specialist states or is given objectives ; determines what ends are to be achieved. So at this stage systems analyst answers to two questions simultaneously, i. e, "what is ?" and "what is required ?" and the specifies the problem, i.e. discrepancy between 'what is' and 'what is required Popham (1970) has described needs assessment as identifying discripencies between desired outcomes and current status. In other wordsat thisstage the systems pecialist epecifies the problem (system) and environment (context) and translates 'needs' into objectives keeping in mind the ablsolute envirnmental constraints and relative constraints.

At the second stage, the systems specialist analyses the "termensously complex" network of interactions in the relevant system in the context of the envirnment and its influences on the system. Thus hes qecifies the requirements of each objectives. At the same time he attempts to collect data regarding alternative approaches or generates alternative approaches to meet these requirements. Thus he performs a system analysis. Thus, at this stage the system specialist describes the systsm (problem) and its environment ; discusses interactions in the system and between the system and its environment ; describes current structures, functions, and roles. , Identifies contraints (both absolute and relatives) and outlines alternative courses of action.

The third stage for the system specialist is selection of approaches to reach the specified goals (objectives), i. e. minimization or elimination of discrepancy between "what is" and "what is required" which has been discussed at first stage. For this purpose he specifies criterion ; "approach versus criteria" analysis and thus conducts "trade-off" process for selection of appropriate approach to meet requirements of each objective.

Having done the first three steps now the system specialist performs systems syntesis (designing the system). At this stage the systems specialist is equipped with specified objectives. requirements of these objectives, and approaches needed for achieving each objective. On the basis of these elements he prepares an integrated action plan or designs the system in terms of inputs, process (procedures and transaction within the system, including decision and control mechanisms, i. e. "feedback") and output Now to dtermine the validity of outcomes of this system he implements it on a sample or in a simulated situatioa and determiness which alternatives provide the best solution at maximum efficiency and minimal cost. Now the charateristics of the output or product are examined to determine the extent to which the outcome meets the criteria identified and setisfies the objectives. If discrepancy is still present, then "objectives" and "approaches" are further examined and modification or re-design is carried out to meet the requirements which is characterietic of a self-correcting or closed-loop solving model. Thus, system syuthesis is carried out and system is designed for large-scale implementation in real situations. Detailed steps of these stages may be presented in a schematic flow chart given in figure. III.

(FLOW CHART OF STEPS INVOLVED IN SYSTEMS APPROACH)


1. Specify Needs and/or problem In Context with the Environment.
2. Translate the Needs or Problem Into Specific Measurable Objectives
3. Constraints Specify Resources
4. Generate Alternative Solutions and Approaches for Achieving Objectives
5. Test the Alternative Solutions Against Slection Criteria and select best of the Approaches from Available
6. Develop Selection Criteria
7. Work out Details of Tasks to be Carried out by each Variable In the System and Implement On a pilot sample
8. Evaluate The Results Whether it achieves predetermined output
9. Feedback the data for need of modification
10. Conduct Feasibility Study to Find Whether This System is Feasible in the Light of the Constraints
Yes
No
Yes
Output

(Doted lines show feed-back in the formation stage among sub-system)
Fig. III

5

System Approach to Non-Formal Education

■ ■

First requirement of system specialist for planning for recordering of the existing system of NFE or planning a new system of NFE is detailed information about the system that exists. Many different types of data are needed. The quality and objectivity of the data collected and the form in which they are presented to decision-makers will deeply influence the systematic planning. Good data make possible continuing reformation of sensible objectives and clear deliberation on the best means of achieving them. In case of planning Non-formal Education system following basic data will be needed :

1. Enrolment figures for all levels of education.
2. Percentage of drop-outs and repeaters at all levels.
3. Percentage of school age population not receiving any education.
4. Number of qualified teachers available in that community.
5. Number of educated persons and skills specialists available in the community.
6. Prefessional training facilities available.

7. Inventory of school buildings and buildings that could be used for educational purpose in the community, instructional materials, equipment. Estimates of utilization rate.
8. Budgets available and budgetory constraints.
9. Adult (or continuing) education facilities, and estimated participation.
10. Adult literacy figures and information about each illiterate.
11. Vocational training statistics.
12. Shortage of skilled manpower in the economy.

Besides this, the statistics, if they are to be useful in planning, must include enough information on the past and the future (projections for five to ten years ahead) to reflect population trends, village to city mobility, and changing economic and social requirements. Comdrehensive data collection tends to highlight all kinds of things that previously had been overlooked. Attempt may also be made at identifying the results of the educational system.

Resources...—their allocation and use-are central to educational system planning. When planning a new educational system make sure of adequate resources. These resources could be categorised under 1) money ; 2) manpower ; 3) equipment/buildings and 4) programmed materials. All are essential in the right amounts of the right quality for the right period of time ahead if a new system is to succeed. It demands programme budgeting, which relates expenditure directly to objectives, and which groups manpower, equipment, and buildings into functional programme.

Developing a Model For Planning Non-Formal Education : A Systems Approach

To develop this model 50 NFE facilitators were invited to porticipate in a two days workshop. It was of 24 hours duration. It included a few lectures, demonstrations and group work for developing a model for planning NFE using systems approach.

Fifty participants attended this workshop. The participants were divided into ten groups, out of which one group worked as coordinating group whereas each one of the remaining nine groups concentrated one aspect (step) of the model. These steps, after detailed discussion, were adapted from the model developed by La Forest (1973). Step by step development of the model and critical functions of each sub-system have been presented in the following discussions.

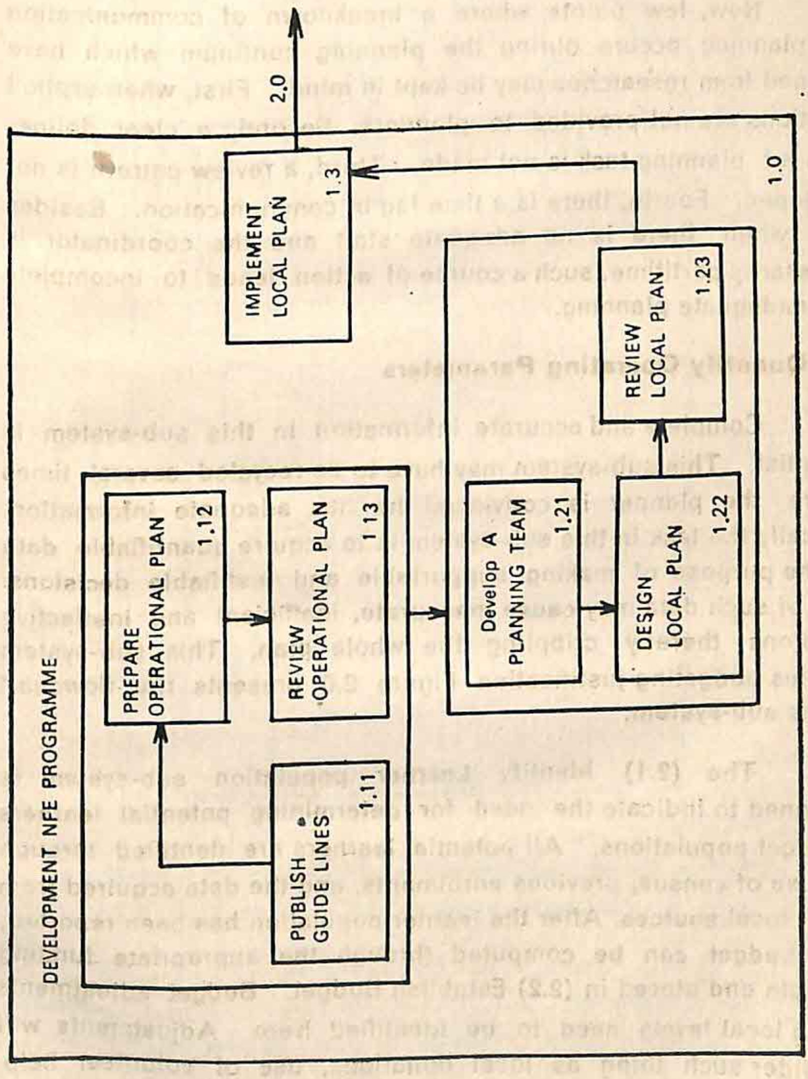
Development of Different Sub-Systems of the Model

1.0 Developing NFE programme

This is the first of the nine sub-systems where planning begins. Flowchart of this sub-system is given in figure. It is supportive to the other systems as a base point of administration, policy and regulatory procedures. As the planner cycles through the model this sub-system will become more explicit. The more the planner 'cycles' through the model the more specific and predictive he will become. The (1.1) identify District plan sub-system which is offered at this point to enable planner to determine district procedures. In (1.11) publish Guide lines, guide lines given at district level are stored because, local plan cannot be contrary to district guidelines. Hence such guidelines may be stored in a folder marked (1.11). In order to develop better understanding local plan planners are suggested to review District plan (1.13) before initiating for local plan planning.

Local planner's first self directed activity occurs in the (1.2) Develop Local Plan sub system. The first event in the sequence should be that the local director must (1.21) Develop planning Team Approach taking representatives from all major groups and develop the planning model in a narrative form. This model may be stored in (1 22) Design Local plan functions. This narrative model is reviewed in (1.23) Review Local plan, by an advisory group and the results may be forwarded to (1.12) prepare operational plan at district level, for approval and inclusion in the master plan. Any information from further effort or recycling of the model is stored for future use or request by district official and/or local official.

In review, essential to (1.12) prepare District plan is the careful compilation of all local plans and the coordination of all these plans into a districtwide master plan. Such a plan is feed-back to the local and this closed submission review cycle permits maximum communication and development of realistic planning goals.



(Fig.1.0 Developing NFE Programme)

Local planners should take care in defining the roles and tasks in the (1.21) Developing planning Team Approach, careful selection of people at this stage will help the total planning as well as follow-up. The groud initiated discussion with eighteen sub-systems of this system and finally accepted nine to design this system.

Now, few points where a breakdown of communication and planning occurs during the planning continum which have emerged from researches may be kept in mind. First, when explicit directions are not provided to planners, Second, a clear delineation of planning task is not made. Third, a review patrern is not developed. Fourth, there is a time lag in communication. Besides this, when there is no adequate staft and the coordinator is necessarily partitime, such a course of action leads to incomplete and inadeguate planning.

2.0 Quantify Operating Parameters

Complete and accurate information in this sub-system is essential. This sub-system may have to be recycled several times before the planner is convinced he has adequate information. Basically the task in this sub-system is to acquire quantifiable data for the purpose of making supportable and justifiable decisions. Lack of such data may cause inaccurate, inefficient and ineffective decisions thereby crippling the whole plan. This sub-system enables budgeting justification Figure 2.0 presents the flowchart of this sub-system.

The (2.1) Identify Learner population sub-system is designed to indicate the need for determining potential learners or target populations. All potential learners are identified through the use of census, previous enrolments, and the data acquired from other local sources. After the learner population has been reported, the budget can be computed through the appropriate funding formula and stored in (2.2) Establish Budget. Budget adjustments along local levels need to be identified here. Adjustments will consider such thing as local donations, use of volunteer help, outside resources and district/state funds. For example class cost may be reduced by availability of fee teacher, cost of materials may be reduced by free materials from some organization.

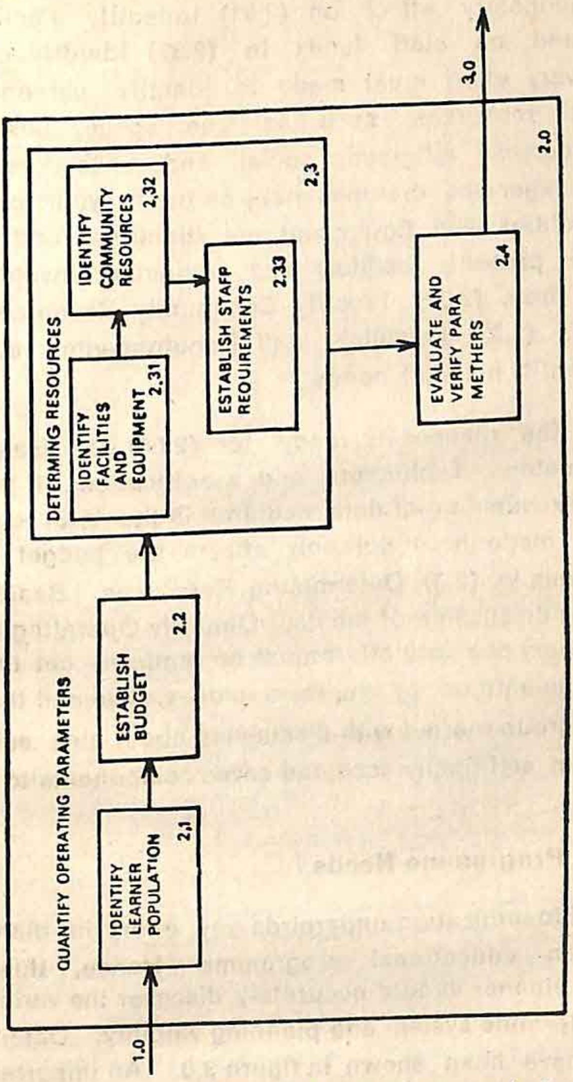

1.0
QUANTIFY OPERATING PARAMETERS
IDENTIFY LEARNER POPULATION
2,1
ESTABLISH BUDGET
2.2
DETERMING RESOURCES
IDENTIFY FACILITIES AND EQUIPMENT
2,31
IDENTIFY COMMUNITY RESOURCES
2,32
ESTABLISH STAFF REOUIREMENTS
2.33
2,3
EVALUATE AND VERIFY PARA METHERS
2,4
2.0
3.0

Fig. 2.0 Quantifying Operating Parameters

In (2. 3) Determining Resources much of the success of a local programme can be predicted. Cost-free location, local talents, and community resources may allow to extend programme budget. (2.32) identify community Resources will have budgetory effect on (2.31) Indentify Facilities and Equipment and on staff funds. In (2.32) Identify community Resources every effort must made to identify personal, fiscal, and physical resources, such as free space, business and industry resources; religious, social and civic groups, and governmental agencies that may have an inp in your programme. In (2.32) Facilities and Equipment are identified and recorded. Not only are present facilities and equipment inventoried but potential aid from (2.32) Identify Community Resources should be identified. (2.33) Establish staff Requirements require the planner to identify his staff needs.

Now the planner is ready for (2 04) to Evaluate and Modify parameters. Evaluation and modification of parameters is subject to examination of data acquired in the total sub-system. Any decision made here not only affects the budget but all of the sub-systems in (2.3) Determining Resources. Besides this to summariza the discussion of the (2.0) Quantify Operating parameter sub-system, every possible effort must be made to get informatjon that can be quantified by numbers, money, time and the like. In this case the group started with discussing about nine sub-systems of this system and finally accepted seven components to formulate this system.

3.0 Identify Programme Needs

Need identification undergirds any effort in planning and conducting an educational programme. Hence, this system warrants that planner should occurately discover the various needs which will determine system and planning vaibility. Details of this sub-system have been shown in figure 3.0. An important filter of needs is the programme parameters identified in (2.0). There may be a need for a course in car driving, but if there are a small number of participants, a restrictive budget, non-availability of teacher (motor driving) and an NFE policy prohibiting this activity, then satiofying such a need is not realistic. Need identification requires a survey of the universe of the participants as well as

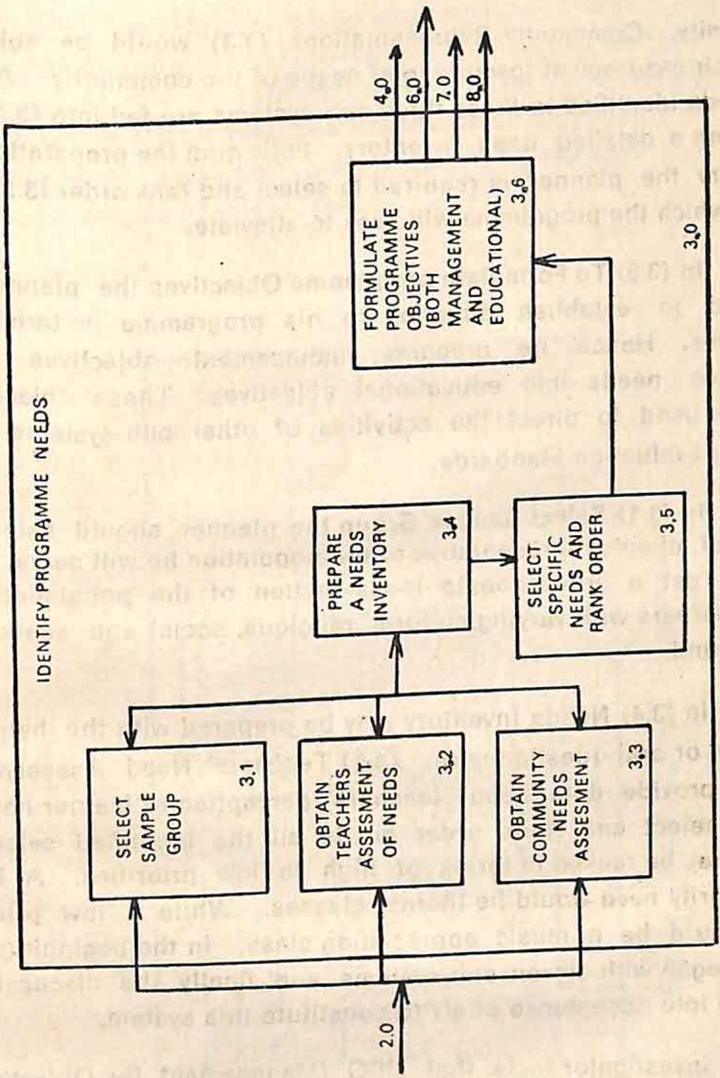

IDENTIFY PROGRAMME NEEDS
3.0
2.0
SELECT SAMPLE GROUP 3.1
OBTAIN TEACHERS ASSESMENT OF NEEDS 3.2
OBTAIN COMMUNITY NEEDS ASSESMENT 3.3
PREPARE A NEEDS INVENTORY 3.4
SELECT SPECIFIC NEEDS AND RANK ORDER 3.5
FORMULATE PROGRAMME OBJECTIVES (BOTH MANAGEMENT AND EDUCATIONAL) 3.6
4.0
6.0
7.0
8.0

Fig. 3.0 Identifying Programme Needs

determining his own specific needs. Such an input is provided by (3.1), (3.2) and (3.3).

Teachers (3.2) are most likely to be able to reflect the needs of a learner because of their training and contact with students (experience). Students (3.1) would be able to tell about their immediate needs and needs of their fellow citizens in the community. Community Representations (3.3) would be able to give their assessment towards total needs of the community. All of the needs identified in these three sub-systems are fed into (3.4) for preparing a detailed need inventory. Following the preparation of inventory the planner is required to select and rank order (3.5) the needs which the programme will seek to alleviate.

In (3.6) To Formulate programme Objectives the planner is required to establish direction to his programme in terms of objectives. Hence he prepares management objectives and translates needs into educational objectives. These objectives are also used to direct the activities of other sub-systems and serve as evaluation standards.

In (3.1) Select Sample Group the planner should select a group of clients representative of the population he will serve. Be sure to get a proportionate cross-section of the population by using learners with varying cultural, religious, social and economic background.

In (3.4) Needs Inventory may be prepared with the help of a written or oral questionnaire. (3.2) Teachers' Need Assessment should provide data about teachers' perception of learner needs. In (3.5) select and Rank order needs all the identified selected needs may be ranked in terms of high to low priorities. A high NFE priority need would be literacy classes. While a low priority item would be a music appreciation class. In the beginning the group began with eleven snb-systems and finally the discussions resulted into acceptance of six to constitute this system.

investigator fecls that MBO (Management By Objectives) approach can be employed fruitfully and effectively in (3.6) formulate programme objectives. In any case, the planner needs to clearly establish objectives that can be communicated to his staff or co-workers.

4.0 Promote programme

The sequence of functions in this system is important, for it allows sequential planning and concerted efforts. The entire (4.0) promote programme sub-system is concerned with publicizing a programme and student recruitment. The concomitant facet of recruitment is always retention wheress retention is dependent upon good teaching. Flowchart given in figure 4.0 represents the constituent components of this system.

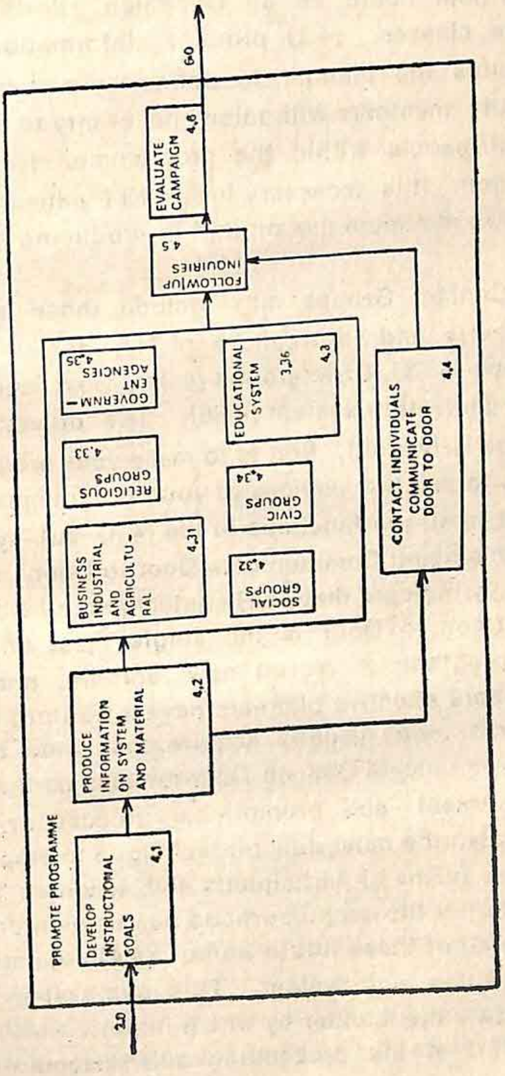

2.0
PROMOTE PROGRAMME
DEVELOP INSTRUCTIONAL GOALS 4,1
PRODUCE INFORMATION ON SYSTEM AND MATERIAL 4,2
BUSINESS INDUSTRIAL AND AGRICULTURAL 4,31
SOCIAL GROUPS 4.32
RELIGIOUS GROUPS 4,33
CIVIC GROUPS 4.34
GOVERNMENT AGENCIES 4,35
EDUCATIONAL SYSTEM 3,36 4,3
CONTACT INDIVIDUALS COMMUNICATE DOOR TO DOOR 4,4
FOLLOW UP INQUIRIES 4.5
EVALUATE CAMPAIGN 4,6
6.0

Fig. 4.0 Promoting NFE Programme

The *(3.6)* programme objectives set on the basis of identified needs are fed into *(4.1)* Develop Information Goals, since they all determine the thrust of the efforts in programme promotion, *(4.1)* also requires the listing of goals in terms of those to be stressed. For example, information goals could be that every teacher will make ten door-to-door contects every day for four consecutive weeks. Other goal could be all compaign efforts will begin two months before classes. *(4.2)* produce Information System and Materials requires the planner to define tasks of each role incumbent and identify members with talent necessary to produce unable materials for all people within **the** programme. It is necessary for all NFE education. It is necessary for all NFE education programme planners to make minimum use of staff in producing materials.

(4.3) Contact Groups may include those concerned with business, industry and agriculture *(4.31)*, social groups *(4.32)*, Religious groups *(4.33)*, Civic groups *(4.34)*, Govt. agency *(4.35)* and Educational organization/system *(4.36)*. The object of contacting all these groups is twofold, first is to make your programme known, and second, is to sell the services of your programme. Pehaps the most important to all the functions in the *(4.3)* sub-system is *(4.4)* Contact Individuals and Communicate Door to Door. Experiences in the field storngly indicate that *(4.4)* contacts at individual level and communicate Door to Door is the single most effective way to promote the programme, recruit new learners, and reinvolve old learners, The more effective planners have a well organized face-to-face programme and usually acquire first time students most efficiently. Communicate Door-to-Door remains as the single most effective recruitment and promotional process available to the planner It is also the most difficult technique to employ. Another system may have teams of participants and teachers making door-to-door contact after the neighbourhood has been informed (through the other svstems*)* of these future visits. *(4.4)* data are sent to *(4.5)* Follow-up Inquiries sub-system. This sub-system requires the planner to indicate the manner by which inquiries will be handled. The entire effort of the proceeding sub-systems was to produce

resources and participants for the programme. Unless these inquiries are followed up in carefully organized method, all efforts will have been fruitless. (4.6) Evaluate compaign is the last function within the entire (4.0) sub-system. It requires an investigation of all promotion activitiee to determine the effectiveness of the

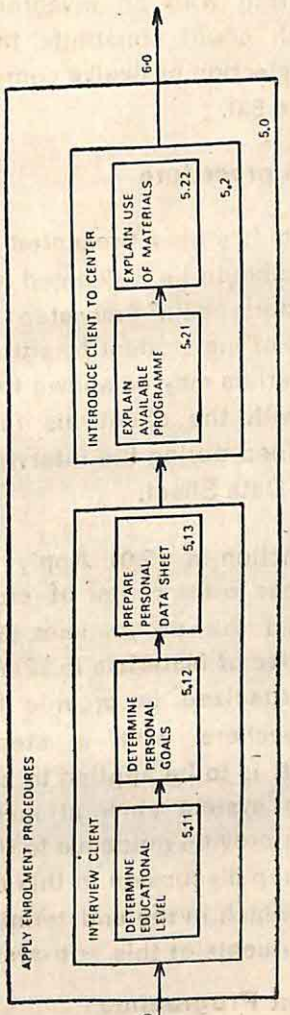

6.0
5,0
APPLY ENROLMENT PROCEDURES
INTERVIEW CLIENT
DETERMINE EDUCATIONAL LEVEL
5,11
DETERMINE PERSONAL GOALS
5,12
PREPARE PERSONAL DATA SHEET
5,13
INTERODUCE CLIENT TO CENTER
EXPLAIN AVAILABLE PROGRAMME
5,21
EXPLAIN USE OF MATERIALS
5.22
5,2
7,0

Fig. 5.0 Applying Enrolment Procedures

efforts. Effective techniques need to be identified and stored for subsebuent use. In the end, the planner must be encouraged to perform the *(4.0)* promote programme task several times during the year. In fact, more staff and local talent are available, it may be necessary to continuously recyle various sub-systems within *(40.)* promote programme.

This group started with an inventory of possible twenty one sub-systems which could constitute this system. The final analysis resulted into selection of twelve component systems as has been shown in the figure 5.0.

5.0 Apply Enrollment procedure

This sub-system has been presented in figure 5.0. Upon his arrival a srudent should be welcomed and interviewed. (5.1) Interview the Client starts with first step as to Determine the Educational Level (5.11) of the student by sitting with the participant so that appropriate materials may be shown to the learner. Teacher should also discuss with the client his (5.12) personal Goals. Information thus obtained during the interview may be redorded in (5.13) prepare personal Data Sheet.

The second function in (5.0) Apply Enrollment procedure is to introduce the learner to the center of classroom (5.2). When the teacher can Explain the programmes (5.21) and their purpose as well as Explain the Use of Materials (5.22) available at the center. This entire system is organized to provide both the experienced and inexperienced teachers with a step-by-step process for enrolling a student. It is to be applied to both new and returning students. This entire system aims at making the student feel welcome and wanted to provide guidance to the teacher in accomplishing this task. Group discussion in this case started with a list of eleven sub-systems which in the end terminated after accepting seven of them as constituents of this sub-system.

6.0 Plan and Conduct Programme

(i) For supervisory, planning and administrative staff

With (6.0) plan and Conduct Programme there is one sub-system which is the functional task of the planner that is (6.3)

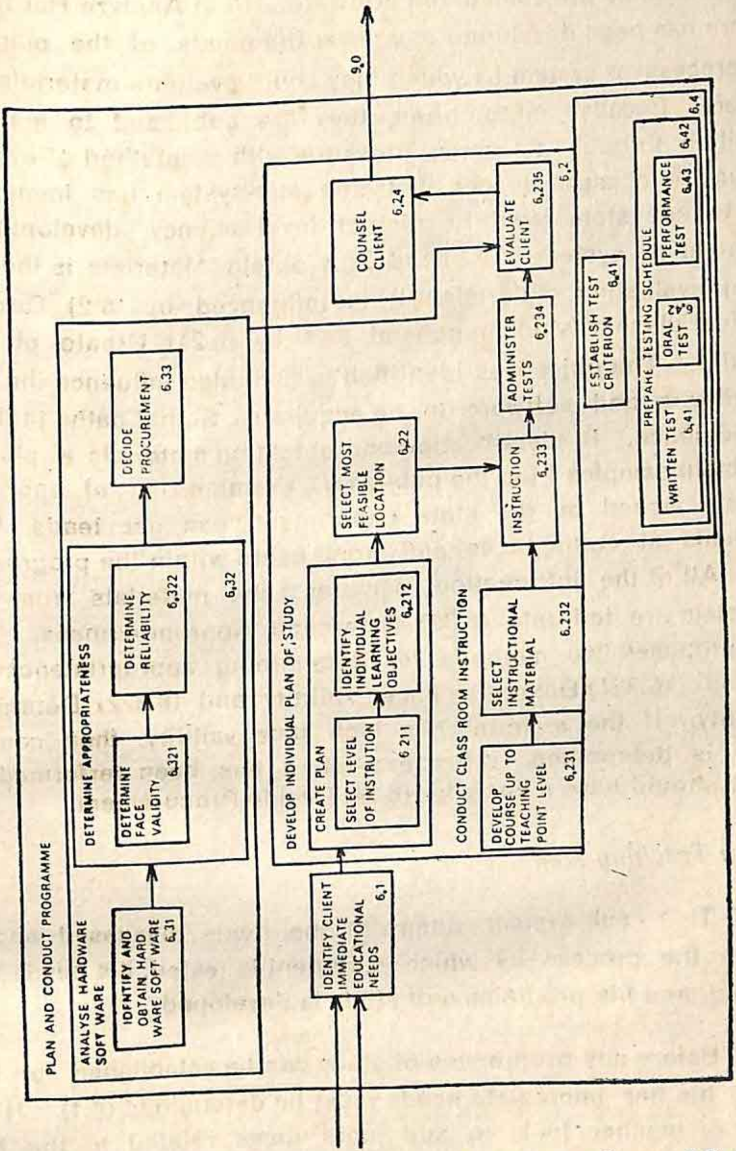

9,0
PLAN AND CONDUCT PROGRAMME
ANALYSE HARDWARE SOFT WARE
IDENTIFY AND OBTAIN HARD WARE SOFT WARE 6,31
DETERMINE APPROPRIATENESS
DETERMINE FACE VALIDITY 6,321
DETERMINE RELIABILITY 6,322
6,32
DECIDE PROCUREMENT 6,33
IDENTIFY CLIENT IMMEDIATE EDUCATIONAL NEEDS 6,1
DEVELOP INDIVIDUAL PLAN OF STUDY
CREATE PLAN
SELECT LEVEL OF INSTRUTION 6,211
IDENTIFY INDIVIDUAL LEARNING OBJECTIVES 6,212
SELECT MOST FEASIBLE LOCATION 6,22
COUNSEL CLIENT 6,24
CONDUCT CLASS ROOM INSTRUCTION
DEVELOP COURSE UP TO TEACHING POINT LEVEL 6,231
SELECT INSTRUCTIONAL MATERIAL 6,232
INSTRUCTION 6,233
ADMINISTER TESTS 6,234
EVALUATE CLIENT 6,235
6,2
ESTABLISH TEST CRITERION 6,41
PREPARE TESTING SCHEDULE
WRITTEN TEST 6,41
ORAL TEST 6,42
PERFORMANCE TEST 6,43
6,42
6,4

Fig. 6.0 Planning and Conducting NFE Programme

Analyze Hardware/Software. Flowchart shown in figure 6.0 present constituent parts of this sub-system. For our purposes, hardwar is sysnonymous with equipment and software with content.

teaching machine is hardware, but the programme materials used with the machine are considered software. **(6.3)** Analyze Hardware/Software has been developed to answer the needs of the planners of a process or system by which they could evaluate materials and hardware. Because, all too often, they are subjected to material acquisition through salesman pressure, with no method of evaluation such purchases. I feel that this sub-system has immediate value to any state level or district level agency developing a dissemination system. **(6.31)** Identify/obtain Materials is the first step in evaluating materials. It is influenced by **(6.2)** Develop Individual plans of study in general and by **(6.21)** Create plan in particular. The objectives identified in (3.6) also influence the type of hardware and software to be acquired. Signal paths indicate such influence. In identification and obtaining materials a planner may obtain samples from the publisher, examine list of approved materials issued by the state department, can get leads from individuals at conferences and from users within the programme itself. All of the information, samples, and materials from this sub-system are fed into (6.32) Determine Appropriateness. This model proposes two methods for determining appropriateness of materials. **(6.321)** Determine Face Validity and **(6.322)** Determine Reliability. If the material has high face validity, then content validity is determined. After evaluation has been performed the planner should have a basis for **(6.34) Decide Procurement.**

(ii) For Teaching staff

This sub-system alongwith the items discussed above, includes the process by which a student is tested, his needs are identified, and his programme of study is developed.

Before any programme of study can be established for the learner, his/her immediate needs must be determined **(6.1)**. If the planner or teacher feels to add more items related to the NFE programme to the inventory of needs identified above may do so and develop new sub-system. Following the needs identification, the teacher has to (6.2) Develop An Individual plan of study. At this stage he may like to test the client. Data thus obtained may help the teacher in finding the right kind of learning materials to help the student meet his goal. Aim of such testing should be to establish entry behaviour level of the student. The first step in this is enable the learner to begin to meet his immediate needs. This function is performed in the (6.21) Create plan sub-system. First, the teacher, using pere-test. Selects the grade level of instruction (6.211) in which the learner will be able to be successful. Next in consulation with the learner, he identifies individual learning objectives (6.212). Once this has been completed select Most Feasible Location (6.22) function means that the learner and teacher select the learning site which best suits the learner. In (6.23) Conduct Classroom Instruction, the first task, is to (6.231) Develop Course Outline to the teaching point level. (6.232) Select Instructional Materials matching with the needs of the learners. Upon receipt of the learning materials from (6.232), the (6.233) Instructional Function begins. After the initial instruction takes place the teacher will (6.234). Administer Tests. Few Traditional texts have appropriate, testing points included in programmed materials. The classroom teacher may develop his own tests or adapt other published tests. Analyse the results obtained by administration of test (6.234) and Evaluate Client (6.235). The learner either continues on with his learning programme, if he is working successfully, or the teacher cycles the learning sequence back (6.231). (6.24) Counsel Client requires that the teacher keep in contact with the learner to ensure that any problems which may arise can be dealt with. It does not imply that the teacher is to provide professional counselling sevices. Finally Establish Test Criteria (6.3) and prepare Testing Schedule (6.4) for final evaluation of the client. Teasting schedule may include written Test (6.41), Oral Test (6.42) and performance Test (6.43). This decision depends on the descrition on the part of the teacher.

It is the largest sub-system among the nine. The group started with a long list of 89 possible constituent sub-systems. After discussiong each of these in minor details the group rwached to the conclusion that twenty four of these sub-systems could be accepted to constitute this system.

7 0 Recruit and Select Faculty

This sub-system comes under the rubric of staff development. Hence it was developed simutaneously, with the supportive (8.0) Train Faculty snb-system to provide coordinators and planners of NFE programmes a staff development process. This (7.0) subsystem has deen presented in figure 7.0.

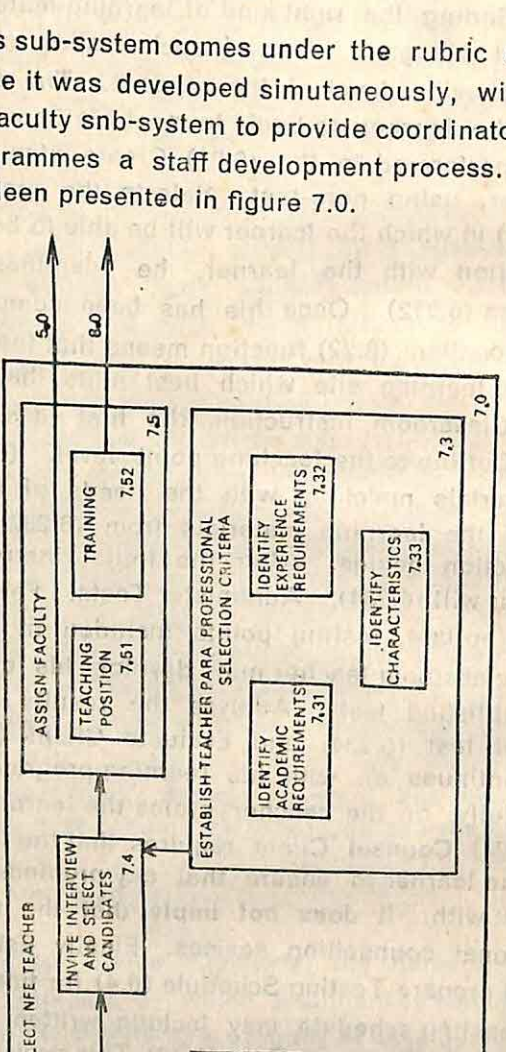

5.0
8.0
7.0
RECRUIT AND SELECT NFE TEACHER
DECIDE MEMBER OF TEACHERS 7.1
DECIDE NUMBER OF PARA PROFESSIONALS 7.2
INVITE INTERVIEW AND SELECT CANDIDATES 7.4
ASSIGN FACULTY
TEACHING POSITION 7.51
TRAINING 7.52
7.5
ESTABLISH TEACHER PARA PROFESSIONAL SELECTION CRITERIA
IDENTIFY ACADEMIC REQUIREMENTS 7.31
IDENTIFY EXPERIENCE REQUIREMENTS 7.32
IDENTIFY CHARACTERISTICS 7.33
7.3
3.0
8.0

Fig. 7.0 Recruiting and Selecting NFE teachers

It is concerned with establishing selection criteria as well as desoribing the process by which tehchers may be recruited and assigned. Recruitment and selection of faculty need to be subjected to a systematic analysis. The main task of the (7.0) sub-system is in identifying components of (7.3) Establish Teacher-Paraprofessional Selection Criteria. The process starts with deciding about number of teachers (7.1) and paraprofessionals (7.2). In (7.31) Identify Academic Requirements such considerations as cetifications training, cognate backgrounds must be delineated and recorded. If the planner needs to waive certain academic requirements, as in the case for teachers of machine shop, auto-mechanics, and masonry, then a clear explanation of such an action needs to be recorded. The same applies to (7.32) Identify Experience Requirements. The Planner must describe the elements of experience requirements and record them in this sub-system. (7.33) Identify characteristic is a controversial area. To identify this the present author developed a characteristic inventory which may be with minor modification, if needed, be used. Besides this to meet the neet the needs of this function criteria identified by a group of experienced teaches selected by their peers may be used. Once this process is over applications for NFE teacher be invited. One should not restrict only to former adult education teachers or school teachers. The use of school teachers as NFE teachers is subject to much criticism because of fatigus factors, availability, outside progessional obligations, and other concerns, our society has trained people who could well serve the NFE programme as their chief progessional obligations and other concerns. Such a part-time person usually devotes for more time to his efforts than the practicing professional who teaches full time. All teacher candidates who respond to advertising efforts are screened by the criteria listed in (7.3) and are selected for interview. Following the interview, candidates are selected or rejected (7.4.). Again the criteria in (7.3) are used as selection or de-selection standard. Assign Faculty (7.5) is two fold in nature. Here coordinator may assign to some to a Teading Position (7.51) but he may also assign the employee to a Training Programme (7.52). Here there are two important relationships between the sub-system (7.0) and other sub-systems. The (7 52) Assign to Training Programme signal path to (8.1) Establish learning objectives is important since the people being assigned to training will require a specific type of

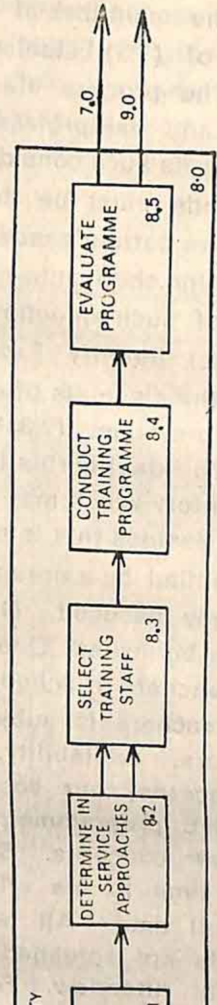

3.0
7.0
TRAIN FACULTY
ESTABLISH LEARNING OBJECTIVES 8.1
DETERMINE IN SERVICE APPROACHES 8.2
SELECT TRAINING STAFF 8.3
CONDUCT TRAINING PROGRAMME 8.4
EVALUATE PROGRAMME 8.5
8.0
7.0
9.0

Fig. 8.0 Training Faculty

training which will dictate the learning objective of a training programme. The criteria stored in (7.3) Establish Teacher-Paraprofessional Selection Criteria become evaluative criteria in (9.13). Evaluation Teachers and in (9.131) Determine Task Performance. in particular.

Initially fourteen sub-systems were thought of for discussion. Finally the group discussion resulted into ten sub-systems constituting this system.

8.0 Train Faculty

This is the second sub-systems of the two sub-systems devoted to establishing astaff procurement and development process. Details of this sub-system has been shown in figure 8.0.

It is formulated on the concept that programme objectives (3.6) and faculty requirements (2.33) dictate training needs to be met. It is predicted on the notion that any educational endeavour requires planned as well as self-renewal activities and that the best determinants of such activities are the programme needs. Seminars, one-day conferences and summer institutes may be used for this purpose.

The objectives identified (3.6) Formulate Programme objectives are fed forward to the (8.0) Train Faculity. For the reason that they set training needs by indicating priorities and programme directions, and they serve as evaluation criteria. The characteristics of the faculty assigned to training will guide the trainer in establishing training patterns. At the same time the training programme will be supportive of all activities in (6.0) plan and conduct programme, hence the trainer must examine every facet of the programme before establishing the training procedures and content.

(8.1) Establishing Learning Objectives is made in such a way that an interface is established with (3.6). After learning objectives are established the trainer should (8.2). Determine

Inservice Training Approaches. It will be the task of the trainer to identify which he shall use, how they shall be related to each other, how they are supportive, and where and when they shall occour. (8.3) Selection of training staff is usually dependent upon the type of training to be held. Interrelationship between the competencies of training staff and selection of training approaches must be kept in mind. Then comes conduct Training Programme (3.4). (8.5) Evaluate programme is subject to the objectives fed forward from (8.1). Establish Learning objectives, which serve as evaluation criteria. The purpose of this evaluations to determine the effectiveness of the staff or training in meeting learning objectives. Results of evaluation should be stored in (8.5). Evaluate programme for further planning reference.

The group concerned with this sub-system started with considering fourteen constituent parts of this sub-system. Finally the group decided that five sub-systems cover the content of this system.

9.0 Conduct Terminal Evaluation

While the model requires constant evaluation as each function is performed, a need for a final analysis exists. Not only that this sub-system will provide input into further planning cycles but future programme justifications and for annual reports. This sub-system serves as the repository for all accumulated data needed to maks long-range plane. Details of this sub-system are showo in figure 9.0.

For (9.0) Conduct Terminal Evaluation the objectives from the preceding sub-systems like (3.6) and (8.1) are sent to provide an index for subsequent evaluation. The teachers need to be evaluated by the extent to which the objectives were met in (9.131). (9.1) Conduct Internal Evaluation is concerned is concerned with the Evaluation of Learners (9.12) and Evaluation of Teachers (9.13) Whereas each of these sub-systems are composed of two subordinate systems in each case. In the case of (9.121) Interview and Evaluate client, an interview scheduls of procedure must be developed and stored. This subsystem fosters non-quantitattve evalation and allows one to gather student impressions, suggestions, and recommendations. (9.13) provides for teacher performance. One of the elements of this evaluation is Learner Achievement (9.132). Since this is one obvious measurements of teaching effectiveness. The planners, also, needs to know dropout data

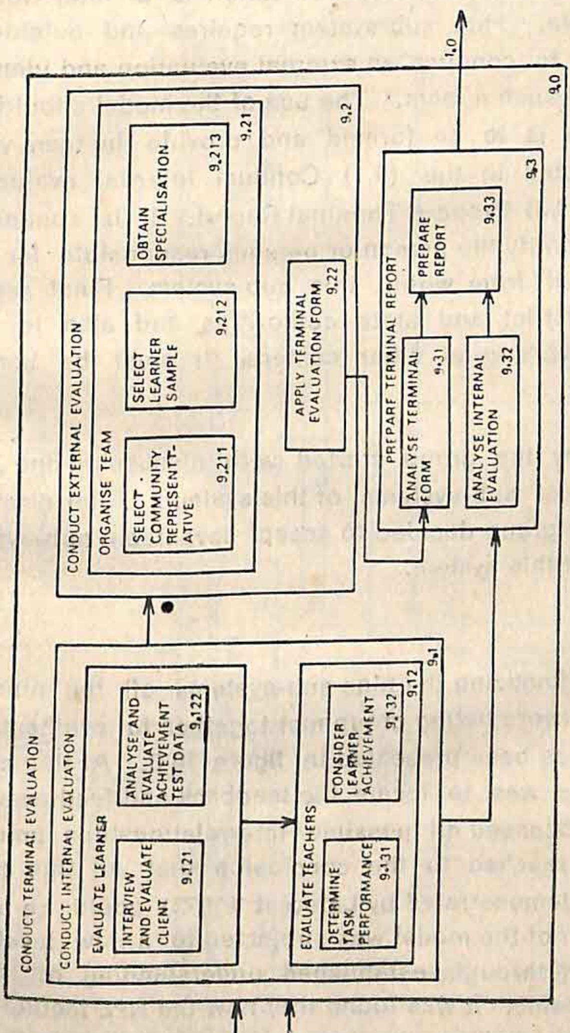

1.0
9.0
CONDUCT TERMINAL EVALUATION
CONDUCT INTERNAL EVALUATION
9.1
EVALUATE LEARNER
INTERVIEW AND EVALUATE CLIENT 9.121
ANALYSE AND EVALUATE ACHIEVEMENT TEST DATA 9.122
EVALUATE TEACHERS
9.12
DETERMINE TASK PERFORMANCE 9.131
CONSIDER LEARNER ACHIEVEMENT 9.132
CONDUCT EXTERNAL EVALUATION
9.2
ORGANISE TEAM
9.21
SELECT COMMUNITY REPRESENTATIVE 9.211
SELECT LEARNER SAMPLE 9.212
OBTAIN SPECIALISATION 9.213
APPLY TERMINAL EVALUATION FORM 9.22
PREPARE TERMINAL REPORT
9.3
ANALYSE TERMINAL FORM 9.31
ANALYSE INTERNAL EVALUATION 9.32
PREPARE REPORT 9.33

Fig 9.0 Conducting Terminal Evaluation

as another measure of teaching effectiveness because of the commonly held belief that a teacher who "keeps" learners in learnining situations seems to be most effective. The other criterion is to (9.132) Determine Task performance. Hence a listing of those tasks by which the teachers will be evaluated and the manner in which they will be evaluated must be developed.

(9.2) Conduct External Evaluation is another function of this sub-system. This sub-system requires and outside team to be developed to conduct an external evaluation and identifies the composition of such a team. The use of the model should indicate how the team is to be formed and provide the team with all of data accumulated in the (9.1) Conduct Internal evaluation are forwarded to (9.3) Propare Terminal Report. It is suggested that the planner identify the person or persons responsible for developing such a report from within this sub-system. Final report may be sent to district and state authorities and also to the other coordinators working at other centers. It must be sent (1.1.) (1.2) and (3.6).

Initially the group started with discussing one & 27 possible constituent sub-systems of this system. After discussing in full details the group decided to accept seventeen sub-systems as constituents of this system.

SYNTHESIS

After finalizing the nine sub-systems all the nine grousp alongwith the coordinating group met together to synthesise these sub-systems has been presented in figure 10.0. At this stage the major objective was to locate the teedback and feedfoward paths. The groups discussed all possible interrelationships among subsystems and reached to the conclusion that at this level the relationships demonstrated by Laforest (1973) could be accepted. This final form of the model was subjected to a low level simulation, by talking through, established understanding of the model by the participants. It was found that now the NFE facilitators were more confident and on the basis of data available to them about their respective community and the data provided by evaluative study they could attempt to develop tentative plans for reorganization of their respective NFE programmes. Follow-up was not possible because of time constraints and lack of funds. But the author used this model in planning a new NFE project known as 'Lalvadi NFE project' in Surat (Gujarat State) which is getting momentum. This model has been found effective both for planning and implementation of NFE project.

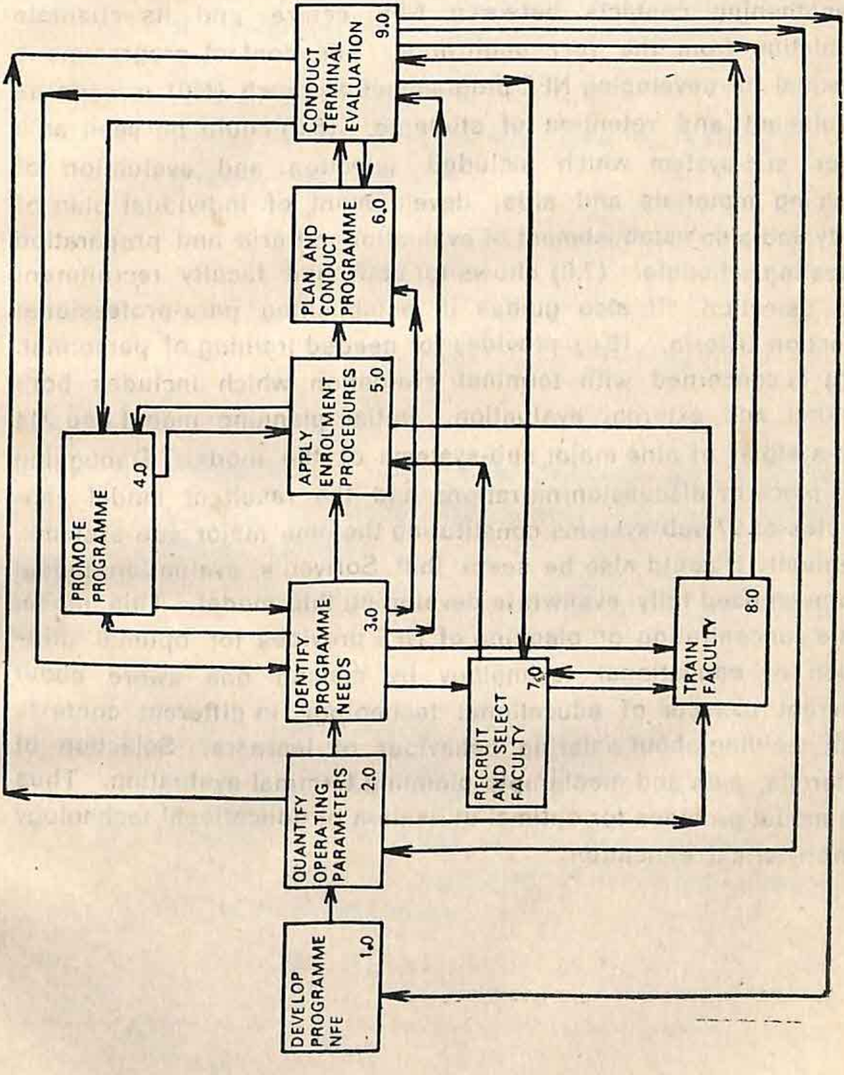

CONDUCT TERMINAL EVALUATION 9.0
PLAN AND CONDUCT PROGRAMME 6.0
APPLY ENROLMENT PROCEDURES 5.0
PROMOTE PROGRAMME 4.0
IDENTIFY PROGRAMME NEEDS 3.0
RECRUIT AND SELECT FACULTY 7.0
TRAIN FACULTY 8.0
QUANTIFY OPERATING PARAMETERS 2.0
DEVELOP PROGRAMME NFE 1.0

Fig. 10.0 *Intergated Model for Planning NFE*

A brief description of the sub-systems in summary form would be useful at this stage. (1.0) reflects district plans and state plans, since all programmes are dependent upon these planning levels. (2.0) enables identification of planning parameters. These parameters are very important from the view point of planning the local plan. (3.0) concentrate on identification of needs because NFE is need based hence specification of needs is essential. (4.0) aims at strengthening contacts between NFE centre and its clientale population from the very beginning. The contact programme is essential for developing NFE programmes as such (5.0) is seen as recruitment and retention of students. (6.0) could be seen as a major suc-system which included selection and evaluation of teaching materials and aids, development of individual plan of study and also establishment of evaluation criteria and preparation of testing schedule. (7.0) allows for staff and faculty recruitment and selection. It also guides in establishing para-professional selection criteria, (8.0) provides for needed training of personnal. (9.0) is concerned with terminal evaluation which includes both internal and external evaluation. Initial planning madel had 214 sub-systems of nine major sub-systems of the model. Debugging took place by discussion/narrations and the resultent model constitutes of 97 sub-systems constituting the nine major sub-systems. Eveniually it could also be seent that Soriven's evaluation model has been used fully evenwhile developing this model. This model while concentrating on planning of NFE provides for optimal utilization of educational technology by making one aware about different aspects of educational technology, in different contexts from deciding about entering behaviour of learners. Selection of materials, aids and media upto planning terminal evaluation. Thus the model provides for optimal utilization of educational technology in non-formal education.

Appendices

NEEDS ASSESSMENT FORM

(COMMENTS FROM NFE TEACHERS)

1. Are there groups of adults in your community not presently being reached by the literacy education of the local Non-formal Education programme ?

   Yes..........................No..............................

2. If yes, please indicate the types of individuals not presently being served.

   ....

   ....

   ....

   ....

3. Please list any educational problems which, in your opinion, the local Non-formal Education program should address.

   ....

   ....

   ....

   ....

4. Indicate the strenghts of the NFE program which you feel could be expanded or improved for greater utilization of resources.

   ....

   ....

   ....

5. Indicate the shortcomings of the NFE program which you feel could be improved. All programs should being and at the same time.

....

....

....

....

6. Using the scale below, rate the following items in order of needed improvement.

1	2	3	4	5
Needs most improvement		Adequate but could be improved		Does not need improvement.

..................In-service training

..................Curriculum materials

..................Instructional methods of teachers

..................Attitude of students toward program

..................Design of ABE curriculum

..................Recruitment and public relations

7. Beginning with the most critical, what are the main problems you face as a NFE teacher ?

....

....

....

....

8. What do you feel are the greatest needs for making this a better NFE program ?

....

....

....

....

9. What do you feel is your greatest need as a NFE teacher ? The ability to get more people involved.

....

....

....

....

10. Please write comments made by your students which indicate long-range advantages and/or disadvantages they have experienced as a result of the NFE program.

....

....

....

....

11. Please write what you believe to be the personal and professional advantages and/or disadvantages you have experienced as a result of being a teacher in the NFE program.

....

....

....

....

12. Please comment on any concerns you have about teaching adults which have not been covered by the questions above.

....

....

....

....

NEEDS ASSESSMENT FORM

(COMMENTS FROM NFE STUDENTS)

1. Are three adults that you know of who could be helped by a program like this ? Yes............No.................

2. If you checked yes, Do you know why they don't come ?

....

....

....

....

3. If you checked yes to number 1, Check what you think they might like to learn.

............Information about sewing, knitting, crocheting

............Information about cooking, canning, freezing

............Information about borrowing money, credit, taxes

............Information about health and safety

............Information about driving

............Information about voting and citizenship

............Information about how to get a job

............Information about other things-please list what they are

....

....

....

....

4. Check those things which you would like to have as part of the course you are now taking.

............Information about sewing, knitting, crocheting

............Information about cooking, canning

............Information about borrowing money, credit, taxes

............Information about Health and Safety

............Information about voting and citizenship

............Information about how to get a job

............Information about other things-please tel what they are

....

....

....

....

5. Check those things that need inproving in the program you attend.

............Books and workbooks

............The way the teacher teaches

............The number of subjects taught

............The way the students feel about the program

6. Suggest other things could be done to improve the program you attend ?

............Offer courses at different times

............Offer courses of subjects other than reading writing, and arithmetic

............Provide helpers for the teacher

.... Provide a better place for the class to meet

.. ..Provide transportation to class

.. ..Other

....

....

....

....

7. My reason for coming to this class is :

....

....

....

8. My goal is :

....

....

....

....

NEEDS ASSESSMENT FORM
(COMMENTS FROM LOCAL CITIZONS)

1. How familiar are you with the concept of Non-Formal Education ? (Literacy education for adults)
   Very familiar...............Reasonably familiar...............
   Vaguely familiar...............Not at all familiar...............

2. How familiar are you with the Non-formal Education program in operation in Churu district ?
   Very familiar...............Reasonably familiar...............
   Vaguely familiar...............Not at all familiar...............

3. Have you had occasion to employ or hear people express opinions about the program or people who have attended the program ? Yes............No...............

4. If yes, please list some of your observations or comments that you have heard.

   ....

   ....

   ....

   ....

5. Are there groups of adults in your community not presently beins reached by the literacy education of the local Education program ? Yes............No............

6. If yes, please indicate the types of individuals not presently being served.

   ....

   ....

   ....

7. If yes, do you know why they don't attend the Non-formal Education program being offered ?

....

....

....

8. List the kinds of things in addition to reading, writing and arithmetic which you think the local Non-formal Education program should address to

....

....

9. Please comment on how well (or how poorly) the Non-Formal Education program is operating in your community.

....

....

INSTRUCTIONAL METHODS APPRAISAL

(STUDENTS FORM)

Directions to Students : In order to get information which can help to improve instruction in the adult education program, you are asked to rate your teacher on each of the items listed below. Please describe your teacher by checking (   ) eithar always, sometimes, or never to each of the sentences listed below.

Always	Sometimes	Never	
…………	………………	………	1. The teacher explains the purpose of the lesson or course.
…………	………………	………	2. The teacher has the course or lesson organized.
…………	………………	………	3. The materials used in class relate to the purpose of the course.
…………	………………	………	4. The teacher's explanations about the subject are clear.
…………	………………	………	5. The assignments made by the teacher are clear.
…………	………………	………	6. The assignments relate to the work done in class.
…………	………………	………	7. The teacher keeps the students interested.
…………	………………	………	8. The teacher helps the students to think for themselves.

Adopted from Dr. Hugh stikler, The Florida state University, Teacher Rating scale, unpublished questionnaire, Department of Higher Education, College of Education, The Florida State University, Tallahassee, Florida, (No Date).

Always	Sometimes	Never	
....	....	....	9. The teacher's tests and grades are fair.
....	....	....	10. The teacher is friendly.
....	....	....	11. The teacher is willing to help.
....	....	....	12. The teacher is honest in admitting when he does not know.
....	....	....	13. The teacher's speech and voice are easy to understand.
.. ..	....	....	14. The teacher is plesant and happy.
....	....	....	15. The teacher relates the lesson or course to other fields and to present day problems.

INSTRUCTIONAL MATERIALS APPRAISAL

(TEACHERS FORM)

Name...Title...................................

Directions : Please indicate your judgement of each factor as it relates to the instructional materials employed in the NFE program.

YES NO CAN'T DECIDE

I. *Goal and Objective Oriented.* The content of the presentation is goals oriented.

.... 1. The golas and objectives are defined and evidenced in the content of the materials.

.... 2. The material seems to achieve ist stated goals or objectives.

.... 3. The content of the materials is free from implied massages which contradict the stated goal (s) or objectives (S).

.... 4. The goals, objectives, and general content of the material are adequately conveyed through this medium.

II. Obiectivity. The content presents information in a fair and impartial way. It does not favor one aspect, event, issue, or group over another.

.... 1. Positive and negative aspects are presented in an objective manner.

.... 2. The material presents a study of real people, real issues, and/or things.

YES	NO	CAN'T DECIDE	
....	....	....	3. The material's content presents controversial points of view but all positions are presented in a fair and impartial manner.
....	....	....	4. The material in free from promoting or propagandizing special interests.
....	....	....	5. The material is free of portraying one group, place, things, issue, or event over another.
....	....	....	6. The presentation excludes the use of harmful generalizations and stereotypes.
			III. *Promotes understanding*. Content prevents other people, places, and things without negative understones.
....	....	....	1. The presentation is free of loaded words, i. e., "backward", "primitive", "dirty," "savage", "uncivilized."
....	....	....	2. The presentation is free of making value judgments toward ethnocentrisms ("mine is better than yours").
			IV. *Level of Sophistication.* The material seems suitable for the entry level and competencies of those learners for whom the presentation is directed.
....	....	....	1. The material (content) reflects an experiential commonality . a sameness of experiences which can be shared by the learners for which it was designed.
....	....	....	2. The students for which the materials are designed should be able to interpret signs (pictures and visuals) and

YES NO CAN'T DECIDE

symbols (words and other abstractions).

……… ……… ……… 3. The content of the material will be challenging to the students for whom it is directed, yet not too difficult and thereby frustrating.

V. *Design variables*. The mathods by which the content was organized and developed, in terms of the use of language and visual elements, technical clarity, production techniques, etc.

……… ……… ……… 1. The length of the material is just about right for those students for whom it was designed.

……… ……… ……… 2. The illustrations and/or visual elements of the material are clear and understandable.

……… ……… ……… 3. The material is not too large of bulky and can be presented with little physical effort.

……… ……… ……… 4. The concepts introduced in the content are well developed and sequentially presented.

……… ……… ……… 5. The material has a feedback mechanism for assessing the student's attainment of the objective (s).

……… ……… ……… 6. The material clearly identifies major points of understanding.

……… ……… ……… 7. The designers (s) of the material provided for student and/or teacher interaction before, during, and/or following the presentation.

YES	NO	CAN'T DECIDE	
....	....	....	8. The material uses prompts and cues (pointers, arrows, underlines, etc.) to assit the learner in attending to the important aspects.
....	....	....	9. The material is free of confusing and/or conflicting concepts.
			VI. *Other.* Besically directed at material developed on technical, vacational, professional, and special interest areas.
....	....	....	1. The content of the material supports and documents all conclusions reached.
....	....	....	2. The information is presented in suitable bits for understanding.
....	....	....	3. The presentation of the information is within the grasp of the learner.
....	....	....	4. There is an accompanying guide or manual to assist the instructional leader in utilizing proper approaches procedures, and evaluative techniques.
....	....	....	5. The material suggests and prescribes other learning activities which the learners might explore.
....	....	....	6. The issues and terms are well defined within the content of the material.

CURRICULUM DESIGN APPRAISAL

Name.. .... Title..........................

1. Do the NFE courses have objectives stated in terms of expected levels of performance and criteria for judging that performance ? Yes......................No.......................

2. Is it possible for a student to choose those objectives within a xourse that meet his individual needs ?
   Yes...................... No.......................

3. Are a variety of learning experiences available to students for attaining a given objective ?
   Yes...................... No.......................

4. Are course outlines and descriptions available to students ?
   Yes...................... No.......................

5. Are the enrolment and completion deates flexible for your course ? Yes...................... No ....

6. Are course offered at times conveniet to students' needs ?
   Yes...................... No............. ....

7. Are provisions, equipment, etc. available for practicing the skills necessary for attaining a given objective or level of performance ? Yes......................No......................
   If no, what provisions, etc. are needed ? ....
   ....

8. Are the outcomes of instruction stated in terms of competencies, skills, or knowledges the student should possess upon completion of given courses ?
   Yes...................... No.......................

9. Is there a horizontal relationship among objectives, levels of performance, and courses at a given level ?
   Yes...................... No.......................
   If no, why not ? ....

10. Is there a hierarchical relationship among objectives, levels of performance, and course for the entire NFE program ?

Yes...................... No..... ....

If no. where might the articulation be improved ?

....

....

11. If there a redundancy among course in the NFE program ?

Yes................. No................. Don't know...................

If yes, where does the redundancy occur ?..............................

12. Are tests criterion referenced or norm references ?

Criterion.............. Norm.............. Dont' know..............

13. Are resources allocated on the bssis of instructional priorities ?

Yes..................... No................. Dont know....................

If no, on what basis are resources allocated ? ....

14. Is the curriculum designed so that new needs can be met ?

Yes..................... No.....................

15. Is the curriculum design based on program goals ?

Yes................. No. .... Don't know....................

If no, on what is the curriculum design based ? ....

....

16. Are long, intermediate, and short range program objectives representative of the overall program goals ?

Yes................. No.................. Don't know....................

17. Is the curriculum based on the educational needs of students ?

Yes................. No....... ....

If yes, list the indicators that the curriculum is based on educational needs of students. ....

....

....

18. Are the needs of the community reflected in the design of the curriculum. Yes................. No................. Don't know ....

If yes, list the indicators that the curriculum is based on the educational needs of the community.

....

.. ..

19. Are the courses centered on subjects or problems related to adult needs ? subjects .... problems related to adult needs..................Both..............Don't know.................

20. At a given level of instruction, do the courses attempt to develop integrated skills ? Yes................. No.................

21. Are the courses offered adequate for completion of basis literacy requirements for entering grade 6 or 8 ?

Yes................. No.................

22. Is the course designed for adult learning experiences rather than child learning experiences ? Adult.............. child..............

If designed for adult learning experiences, list some of the ways. ....

....

....

....

....

STAFF COMPETENCY APPRAISAL

(TEACHERS FORM)

Name.. Title ....

Teachers in the field or Non-formal Education possess certain competencies that enable them to function in the role of a teacher. These competencies may have been obtained through formal education or practical experience. How they were obtained is not important. What is important is that they are present when and individual functions as an NFE teacher.

A list of competencies developed from prior investigations about adult educators is given below. The list represents a summary of skills needed by NFE teachers to function effectively.

Directions : In the next few days your administrator will arrange for the two of you to talk about this list of competencies. it will be helpful if prior to that meeting you have checked that number you feel best describes your development of each competency. The purpose of this meeting is to help you in your continuing professional development as an NFE teacher. It is in no way tied to merit ratings, salary schedules, or tenure.

1	2	3	4	5
I cannot Perform that skill very well		I can perform that skill but need help to do it better.		I can perform that skill well enough to apply it when necessary.

Adopted from D. W. Mocker. A Report on the Identification, Clarification and Ranking of Competencies appropriate for Adult Basic Education Teachers. Kansas City Missouri : University of Missouri, Kansas City, Center for Resourse Development in Adult Education, 1974.

………… 1. Adapt curriculum to the needs of the adult student.

………… 2. Demonstrate personal skill in the process of reading, writing, arithmetic as well as in other basic areas of the NFE curriculum.

………… 3. Organize a plan of skill instruction that demonstrates appropriate sequence, continuity, and integration.

………… 4. Identify needs of individual learners.

………… 5. Identify the basis of mutual respect between teacher and student.

………… 6. Develop a climate that will encourage students to participate.

………… 7. Plan instruction to begin at the students learning level.

………… 8. Develop within the adult a sense of confidence.

………… 9. Develop within the adult a sense of his/her progress and abilities.

…………10. Evaluate teaching effectiveness.

…………11. Modify teaching to accommodate individual and group learner characteristies.

…………12. Plan instruction for individual students.

…………13. Prescribe instructional materials which will meet the abilities of the student.

…………14. Evaluate student progress and provide continuous feedback.

…………15. Relate subject matter to the student.

…………16. Coordinate and supervise classroom activities.

…………17. Help the adult student to determine personal learning objectives and become a self-directed learner.

…………18. Arrange flexible grouping for learning.

…………19. Plan learning experiences for students which will improve word recognition and comprehension skills.

............20. Develop and use a system to keep records for each student.

............21. Diagnose deficiencies in students basic computational and reading skills.

............22. Select and use techniques for particular learning tasks.

............23. Provide practice activities that reinforce classroom instruction.

............24. Plan independent study effectively with student.

............25. Select instructional approaches to remedy deficiencies in reading.

............26. Select instructional approaches to remedy deficiencies in computation.

............27. Devise techniques to facilitate recall.

............28. Demonstrate procedures for determining the instructional reading level of a student.

............29. Help the student develop perceptual processes (Visual and auditory discrimination, fluency in speaking and writing).

............30. Administer, select, and interpret results of tests that will yield necessary data on needs and interests of students.

............31. Formulate instructional objectives and devise a system for involving students in this process.

STAFF COMPETENCY APPRAISAL

(ADMINISTRATOR'S FORM)

Name..Title..............................

Teachers in the field of Non-formal Education possess certain competencies that enable them to function in the role of a teacher. These competencies may have been obtained through formal education or practical experience. How they were obtained is not important. What is important is that they are present when an individual functions as NFE teacher.

A list of competencies developed from prior investigations about adult educators is given below. The list represents a summary of skills needed by NFE teachers to function effectively.

Directions : Please assess the competencies of each NFE teacher according to the scale given below. Each teacher will be given a similar form for their personal assessment of their competencies. Upon completion of the staff competency Appraisal for each teacher, arrange a congerence with each teacher to discuss the assessment. The purpose of the meeting is to aid the teachers in their continued professional development. It is in no way tied to merit ratings, salary schedules, or tenure.

1	2	3	4	5
Teacher Cannot perform that skill very well.		Teacher can perform that skill but needs help to do it better.		Teacher can perform that skill well enough to apply it when necessary

(Adapted from D. W. Mocker. *A Report on the Identification. Classification, and Ranking of Competencies Appropriate for Adult Basic Education Teachers*). Kansas City, Missouri : University of Missouri-Kansas City, Center for Resource Development in Adult Education, 1974.

1. Adapts curriculum to the needs of the adult student.

.... 2. Demonstrates personal skill in the processes of reading, writing, arithmetic as well as in other basic areas of the NFE curriculum.

.... 3. Organizes a plan of skill instruction that demonstrates appropriate sequence, continuity and integration.

.... 4. Identifies needs of individual learners.

.... 5. Identifies the basis of mutual respect between teacher and student.

.... 6. Develops a climate that will encourage students to participate.

.... 7. Plans instruction to begin at the student's learning level.

.... 8. Develops within the adult a sense of confidence.

.... 9. Develops within the adult a sense of His/her progress and abilities.

..............10. Evaluates teaching effectiveness.

..............11. Modifies teaching to accomodate individual and group learner characteristics.

..............12. Plans instruction for individual students.

..............13. Prescribes instructional materials which will meet the abilities of the student.

..............14. Evaluates student progress and provides continuous fedback.

..............15. Relates subject matter to the student.

..............16. Coordinates and supervises classroom activities.

..............17. Helps the adult student to determine personal learning objectives and become a self-directed learner.

..............18. Arranges flexible grouping for learning.

...............19. Plans learning experiences for students which will improve word recognition and comprehension skills.

...............20. Develops and uses a system to keep records for each student.

...............21. Diagnoses deficiencies in students' basic computational and reading skills.

...............22. Selects and uses techniques for particular learning tasks.

...............23. Provides practice activities that reinforce classroom instruction.

...............24. Plans independent study effectively with student.

...............25. Selects instructional approaches to remedy deficiencies in reading.

...............26. Selects instructional approaches to remedy deficiecies in computation.

...............27. Devises techniques to facilitate recall.

...............28. Demonstrates procedures for determining the instructional reading level of a student.

...............29. Demonstrates procedures for determining the instructional reading level of a student.

...............30. Administers, selects, and interprets results of tests that will yield necessary data on needs and interests of students.

...............31. Formulates instructional objectives and devises a system for involving students in this process.

STAFF PRE-SERVICE AND IN-SERVICE TRAINING APPRAISAL

(TEACHERS FORM)

Pre-Service Training

1. Please indicate the extent you have professionally prepared yourself to work in non-formal education programme.

   (a) .... Have taken one or more *Undergraduate* courses in the area of NFE adult psychology, or non-formal education, etc.

   (b) .... Have taken one or more *Graduate* courses in the area of NFE adult psychology, or non-formal eduation, etc.

   (c) .... Have attended one or more teacher training *summer institutes* for NFE.

   (d) .... Have attended meetings the Adult Basic Education Association.

   (e) .... Have attend non-cradit short term conferences or workshops on non-formal education.

2. Were you a participant in a NFE pre-service training program prior to begining teaching in NFE ?

   (a) .... Yes

   (b) .... No (If no, omit Questions 3 through 7 and begin with Question 8)

3. What was the duration of this pre-service training program ?

   (a) .... 1 day or less

   (b) .... 2-3 days

Adopted from Department of Adult Education, The Florida State University, An evaluation of the Mid Alabama Adult and Vocational Education, Demonstration Training Center (July through June 1973). Tallahassee, Florida. The Florida state University, 1973.

(c) .... 4 day to 1 week

(d) .... 8 days to 2 weeks

(e) .... 15 days to 3 weeks

(f) .... Mere than 3 weeks

4. How would you rate the usefulness of this pre-service training program to you as a beginning NFE teacher ?

(a) .... Extremely helpful

(b) .... Moderataly helpful

(e) .... of very little help

(d) .... of no help

5. What was the content of yeur pre-service training ? (Check all that apply.)

(a) .... Purpose and philosophy of NFE

(b) .... Charactoristies of NFE students

(c) .... Working with aides or parofessionals

(d) .... Developing behavioral objectives

(e) .... Individualized instruction

(f) .... Use of methods and techniques (i.e. role playing, group discussions, skits, debstes, etc.)

(g) .... Use of audio-visuals and equipment

(h) .... Curriculum planning

(i) .... Selection, preparation or use of materials

(j) .... Record keeping, rules, and regulations.

(k) .... Testing and evaluation.

(l) .... Diagnosing reading difficulties

(m) .... Recruitment and retention

(n) .... Counseling and guidance

(o) .... Psychology of adult learning

(p) .... All of the above

(q) .... None of the above

(r) .... Other (Please specify)

....

....

6. Of those content areas checked in Item 5 above, which one was most helpful ?

....

7. Of those content areas checked in Item 5 above, which one was least helpful ?

....

8. Do you feel that there are adequate provisions for preservice training ?

(a) .... Yes (If yes, omit Question 9)

(b) .... No

9. Is your criticism of the pre-service training related to :

(a) .... Insufficient quantity

(b) .... Insufficient quality

(c) .... Both

II. In-service Training

10. During the past 12 months have you been a participant in an in-service training activity ?

..........Yes but not related to NFE

(a) ....Yes

(b) ....No (if No, omit questions 10 through 16 and begin with question 17).

11. In how many such in-service training activities have you participated over the last 12 months ?

(a) ....1-3 programs

(b) ....4-6 programs

(c) ....7-9 programs

(d) ....10-12 programs

(e) ....13 or more programs

12. How many days of in-service training for NFE have you had in the past 12 months (1 day equals 6 hours) ?

(a) ....1-3 days

(b) ....4-6 days

(c) ....7-9 days

(d) ....10-12 days

(e) ....13 or more days

13. In general, rate the degree to which your in-service training experiences of the past twelve months have been helpful in improving your effectiveness in NFE.

(a) ....Extremely helpful

(b) ....Moderately helpful

(c) ....Of very little help

(d) ....Of no help

14. What was the content of your in-service training ? (Check all that apply).

(a) ....Purpose and philosophy of NFE

(b) ....Characteristics of NFE students

(c) ....Working with aides or paraprofessionals

(d) ....Developing behavioral objectives

(e) ....Individualizing instruction

(f) ....Use of methods and techniques (i. e. role playing, group discussions, skits, debates, etc.)

STUDENT ACHIEVEMENT APPRAISAL

Name..

Directions : On the following pages are statements of adult performance levels listed as NFE student competencies. The general knowledge fields represented are : (a) Consumer economics (b) Occupational knowledge ; (c) Community resources ; and (d) health within each general knowledge are the following skills are represented (a) reading, (b) writing, (c) Speaking, (d) listening, (e) problem solving, (f) Calculation, and (g) interpersonal relations, The relationship between the general knowledge areas and the skills is shown below.

GENERAL KNOWLEDGE AREAS

		Consumer Economics	Occupational Knowledge	Community Resources	Health
SKILLS	Reading				
	Writing				
	Speaking				
	Listening				
	Problem Solving	Performance Requirement			
	Computation				
	Interpersonal Relations				

(Adapted from N. Northcutt. *A Note Concerning APL Goals, Objectives and Tasks*. Austin, Texas, The Extension Division of the University of Texas at Austin, 1975)

The adult performance Level Literacy Model you are being worked to judge whether or not your students can perform these skills of reading, writing, etc, etc. by completing the following checklist. *The fact that your curriculum is not structured around the general knowledge areas listed above is not important* What is important is that the skills our programme is designed to teach are represented in the numbered statements under each comptency statement. *You do not have to administer each activity to complete the checklist. Indicate your judgement* of each students ability to perform each operation by using the following scale. *Put 1* when you think the *Student can perform* the activity. *Put 0* when you think the *Student cannot perform* the activity. Put ? If you *don't know if the student can perform the activity.*

Remember this is an assessment of student achievement based on your judgment. It is not necessary to test the student in order to file out the checklist.

CONSUMER ECONOMICS

A. COMPETENCY : Student is able to count and convert coins and currency, and to convert weights and measures mathematical operations.

Operations to be performed to demonstrate competency :

1. Using samples of paper and coin monies, to count to several totals.
2. Using samples of paper and coin monies and sample cash register receipts, to make change.
3. Using tables of weights and specific consumer economics examples, to convert among quintal, Kilograms, grams etc.
4. Using tables of volumes and specific consumer economics examples (including recipes), to convert among litres, etc.

B. COMPETENCY : Student understands the concepts of sales tax income tax.

Operations to be performed to demonstrate competency :

1. To read available materials which present rationales for sales tax and income tax.
2. To discuss the differences between sales and income taxes, noting the absence of an "ability to pay" or progressive tax structure of sales taxes.
3. To write a list of common items which are not subject to sales taxes.

OCCUPATIONAL KNOWLEDGE

A. COMPETENCY : Student will be able to identify sources of job information (e. g., radio broadcasts, newspapers etc.) which may lead to employment.

Operations to be performed to demonstrate competency :

1. To list diverse sources of information which can lead to employment, such as word of mouth, employment agencies, newspapers, etc.
2. To read employment ads found in such places as newspapers, bulletin boards, offices and union halls.
3. To write a "job wanted" ad.

B. COMPETENCY : Student will be able to prepare for job applications and interviews.

Operations to be pertormed to demonstrate competency :

1. Using employment ads from the newspapers, to identify and list initial steps toward employment called for by the ads (e. g., letter, telephone call, etc.).
2. In a role playing situation, to call a prospective employer for a job interview appointment.
3. To write a letter to a prospective employer requesting an appointment and giving qualifying information.
4. To properly address an envelope for the letter from (3).

5. Using available materials, to list the things a prospective employee should have before application for employment is made.
6. To discuss reasons why references from past employers or personal friends could be valuable to the job applicant.
7. Using available materials, to chart do's and don'ts for the prospective employee in the interview situation (e. g., dress, behaviour etc.).
8. Using available materials, to list possible questions to ask a prospective employer.
9. To complete samples of job application forms.
10. To write a resume when applying for a job.

C. COMPETENCY : The student will know standeards of behaviour for various types of employment.

Operations to be performed to demonstate competency :

1. Using personal experience and published materials, to discuss proper behavior and attitudes for keeping a job.
2. To discuss consequences (financial, personal) of meeting and not meeting job requirements.
3. Using available materials to read about various ways of dealing with interpersonal conflict on the job.

COMMUNITY RESOURCES

A COMPETENCY : Student will know the types of community services provided for members of society including the purposes of how to gain access to these services.

Operations to be performed to demonstrate competency :

1. To chart from discussion with a teacher or resource person, community services as to area of service (e.g., education, health, consumer, legal leisure), name,

address and telephone number of the facility, requirements to be met in using the service and costs, if any, involved.

2. To discuss the consequedces of not having various services such as the postal system (how would persons communicate with one another, etc.), or fire department etc.

B. COMPETENCY : Student will know various recreational services available in the community.

Operations to be performed to demonstrate competency :

1. Using various resources (e. g., newspaper, parks departments, word of mouth) to list names and addresses of places where individuals can spend leisure time or be entertained (e. g., sports, areas, parks, theaters, etc.).
2. To make a telephone call to a service listed in (1) to ingure about times, costs, reservations, etc.
8. To list names, addresses and telephone numbers of places in the community where one can obtain training in a craft, sport, hobby or other activity.

C. COMPETENCY : Student will have a familiarity with transportation schedules, and be able to calculate fares.

Operations to be performed to demonstrate competency :

1. Using time schedules, to determine departure and arrival times for various modes of transportation.
2. Using the rates set by different modes of transportation (bus, train), to compare the transportation costs involved in a trip the individual would like to take.

HEALTH

A. COMPETENCY : Student will understand how basic safety measures can prevent accidents and will be able to recognize potential hazards, especially hazards that relate to home and occupational safety.

Operations to be performed to demonstrate competency :

1. To read material on home safety and to list various safety measures (tub, mats, night lights, care with electrical appliances and fuses, etc.) that an individual can use.
2. To discuss material on home safety and to list various safety measures (tub. mats, night lighsts, care with electrical applicances and fuses, etc.) that an individual can use.
3. To read material on safety precautions needed during severe weather conditions (electrical storms, storms etc.) and to list these.
4. To read material pertaining to hazards to children and to list effective preventative measures.

B. COMPETENCY : Student will know medical and health services in the community.

Operations to be performed to demonstrate competency :

1. To discuss with a resource person the various medical and health services available in the community.
2. To read lierature from various health agencies in the community (e. g., birth control clinics, V. D. prevention and treatment centers, drug and alcohol abuse clinics, etc.)
3. To write lists of medical and health services with phone numbers, addresses and services available.
4. Using available resources such as the telephone book and city information pamphlets, to list physicians surgeons etc.

C. COMPETENCY : Student will understand the physical and psychological influences on pregnancy as well as the need for proper prenatal care.

1. To read materials on prenatal care.
2. To compile a list of tasks which both parents can share before and after the baby's arrival (e. g., chores, responsibilities, etc.).
3. To construct a menu for a specified period of time (e. g., one week) suitable to meet the dietary and financial needs of a pregnant woman.

S.C.E.R.T., West Bengal
Library
Calcutta
25/3, B. L. Kuse

STUDENT ATTITUDE APPRAISAL

Directions to students : Since you attend the NFE classes on a voluntary basis, your feelings about the NFE program are very important. Please tell what your feelings are about the NFE program by cheeking (   ) either 'Yes' or 'No' To each of the sentences given below. If you don't know or can't decide leave both spaces blank.

I. BUILDINGS AND MATERIALS

YES NO

.... (a) The streets around my class are safe.

.... (b) I like the neighborhood where my class is held.

.... (c) I have trouble finding a way to get to class.

.... (d) I like the building where my class is held.

.... (e) The temperature in my classroom is O. K.

.... (f) The chairs are comfortable.

.... (g) My classroom needs more epuipment (Tape recorders, Files, Projectors reading machines, etc.)

.... (h) The equipment works O. K.

.... (i) The equipment is used when it should be used.

.... (j) The classroom has the right amount of books, workbooks, kits, etc.

.... (k) Most of the materials are interesting and helpful to me.

Adopted from Department of Adult Education; The Florida State University, An evaluation of the Mid-Alabama Adult and Vocational Education Dememonstration Training Center, (July 1971, Through June 1973) Tallahassee, Florida. The Florida State University, 1973.

II. TEACHERS

YES NO

.... (a) My teacher knows my problems and needs.

.... (b) My teacher is friendly.

.... (c) My teacher likes me.

.... (d) My teacher is smart.

.... (e) My teacher uses many different ways of teaching.

.... (f) My teacher helps me when I need it.

.... (g) My teacher makes me feel bad when I make a mistake.

.... (h) My teacher makes learning fun.

.... (i) My teacher talks to me about my classwork.

.... (j) My teacher is interested in my future.

.... (k) I feel free to discuss my personal problems with my teacher.

.... (l) My teacher likes teaching.

III. GENERAL

.... (a) My classes are helping me reach my goals.

.... (b) Other don't know of the importance of NFE classes.

.... (c) More people would take NFE if they knew about it and had more information.

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